

JUNE 1958

SAFETY NEWS

A NATIONAL SAFETY COUNCIL PUBLICATION



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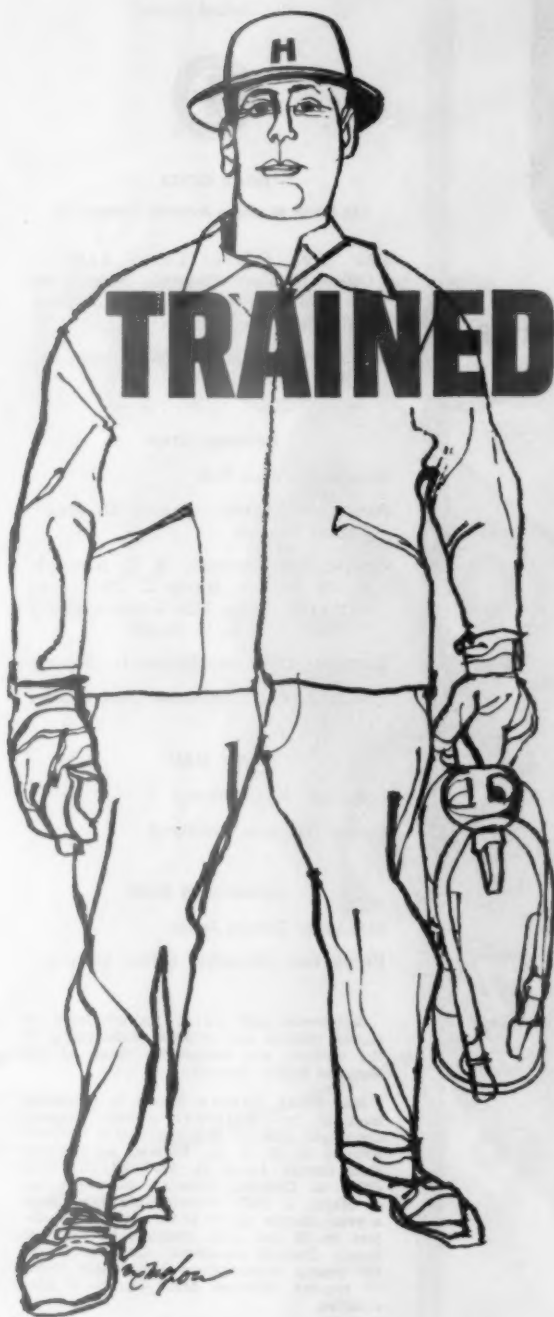
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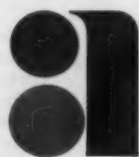
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National Safety News, June, 1958

Circle Item No. 1—Reader Service Card

SAFETY NEWS

A NATIONAL SAFETY COUNCIL PUBLICATION

Vol. 77, No. 6

JUNE 1958

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National Safety Council

Chartered by the Congress of
the United States



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THE COVER

An imaginative presentation of the familiar story of an eye saved. James Cornella's goggles continue to watch over him as they did when they absorbed the impact of a wire tip at Colorado Fuel & Iron Corporation's Pueblo Plant. Photo by C F & I Blast.

37,100 copies of this issue printed



more bounce to the ounce!



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Careers In Safety

A CAREER in safety? If you want to make a million dollars—don't. But if you would like to make a million friends, you might consider it.

If you want an easy job, and someone offers you a job in safety—run the other way, as fast as you can. But if you don't mind putting in that extra hour, and getting back that extra bit of satisfaction in a challenge fully met—you might look into it.

If you like to tread a well-beaten path, where many have gone before and the way is well posted—get into something else. But if you still feel in your heartbeat the blood of the pioneers, you might find safety interesting.

If you can take a beating for nine rounds and two minutes, then bring one up from the floor that has every ounce of you in it—it just might be that safety is for you.

If you can travel along through life with a little less of the material things than you know you could get if you went after them and nothing else; if you would like to look squarely into the eye of every man you meet and know you are doing him a service; if a declining accident rate can give you the vision of a child kept whole, a life lived out, a family circle unbroken; if you are willing to take your pay not only in the currency of the market place but part of it also in the currency of the heart and soul; if you want, when you leave this life, to bequeath a little that wasn't here when you came—then maybe you ought to look into this safety thing.

It is only fair to warn you that, in a way of speaking, safety is "against human nature." All of our legend, all of our fancy, lean to danger. The tradition is of adventure; meeting and conquering superior force; overcoming obstacles; of courage, conflict and victory. Our folklore is a folklore of slaying dragons.

Of course, if we look closely and are uncommonly perceiving, we just might discern that the biggest dragon of all is inside man himself—in his tendency to destroy himself; to raise the bet when the cards are stacked; to sell his birthright for a mess of pottage. And we might comprehend that educating man out of his foolhardy tendencies is the greatest challenge of all.

We just might discover that, in a safety career, we turn out to be an agent of civilization itself—following the tradition of that greatest of all Civilizers who, high on the Cross against the leaden sky of Calvary, loved those who put him there enough to pray, "Father, forgive them, for they know not what they do."

From a speech at a Youth Session at the 1957 National Safety Congress by James D. Hill, National Safety Council District Director for Texas.

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THE SAFETY VALVE



Nothing human is alien to me

—TERENCE

PIPE DREAMS

♥ SOME OF THESE dreams of what life is going to be like in the next century make one wonder whether the dreamers have been smoking something besides cut plug and filter tips. But, judging from what we've seen since World War I, it would be foolish to say anything is impossible.

Recently the *Chicago Tribune* asked some local realtors what they thought life was going to be like 75 years from now. That should be safe enough; nobody who reads today's papers will be checking up on them in 2033.

One of the more audacious forecasts presents the depressing picture of a vast city area stretching from Milwaukee to Gary to Peoria, with 25 million people—the greatest area in the world.

Here are some of the details of this super city:

New and superior highways to increase transportation facilities from the farthest points.

Tall air-conditioned buildings with automatic elevators and ample garage facilities will be built on the sites of antiquated buildings in the downtown area.

Large housing areas will be developed on the periphery of the Loop, and in some cases invade the Loop.

Thousands of high-rise apartment buildings will relieve the burden of housing now borne by individual homes.

Commuting from the suburbs to the city will be the exception rather than the rule.

By 2033, Chicago's central area will be largely institutional in nature. It will combine the greatest one-stop shopping facilities to be found anywhere, offering goods from world markets, with the added inducements of amusement, civic and cultural attractions, government and office buildings, financial institutions, transportation terminals, and huge apartment buildings.

Downtown could be made more interesting through such features as sidewalk arcades. A few small parks would help—places to meet and relax.

We'll need more mass transportation, via median strips in highways.

On the industrial side, factory smoke will be "completely eliminated." Recreation centers will be built in industrial areas by industry, by the city, or by both, to take care of the increased leisure we're going to have.

In factory and business areas certainly, and perhaps throughout the city, radiant heating provided by solar or nuclear energy will eliminate snow shoveling.

There will be no overhead utility lines. Plants will be heated from a central source. Industrial districts will be served directly by air transportation.

The little-publicized trend of processing industries, such as chemicals, will continue to shift operations from indoors to roofless outdoor plants. So will the expansion of industry into outlying areas. New developments will be parks with extensive recreation facilities.

Anybody who tries to puncture these gay balloons will be suspected of taking them too seriously and literally. Future developments may not follow the architects' sketches in detail, but they'll be breathtaking.

Whether you like what's ahead depends on your personal tastes. As for me, I was brought up in the country, and I'm still a hick at heart—when I'm a safe distance from the cows and the hogs. The prospects of living in a vast human anthill is depressing.

The super city, of course, would offer a fine target for atomic shooting irons in the hands of the men of ill will. But the H-bomb isn't the only problem to be faced.

How about traffic congestion and parking? What with the home garage, highways and parking space at destination, the automobile is a voracious space hog.

What's ahead for our sick mass transportation systems? They're always showing the patches of their pants to the rate-making bodies but a raise in fares seems to afford only slight temporary relief.

Realtors are generally aware of the need for parks to provide breathing spaces and relaxation areas. But judging by the crowds using the city's parks and the Cook County Forest Preserves on Sundays and holidays it will take more than a few small parks scattered here and there among skyscraper apartment buildings.

The suburbs will no longer provide an escape for those who want an individual home and a garden. The satellite towns will be completely citified. Those who don't like it will have to move on to exurbia and commute by helicopter. And traffic control in a sky full of egg-beaters is something else to think about.

One might wonder, too, about the effect of such complicated living on the consumption of martinis, bicarbonate, and tranquilizers.

When my severest critic reads this, her comment will probably be, "Why do you take such a negative view of everything?"

Carman Fish



Charlie McCarthy, starring in the new safety film, "Charley's Haunt," asks:

"How does a fellow get himself messed up like this?"

Bell System film about off-the-job accidents shows how they happen...and how to avoid them. Available through your local Bell Telephone Business Office

The Bell System's new safety film, "Charlie's Haunt," is intended to reduce the number of off-the-job accidents. For throughout industry, off-duty mishaps are far more common than accidents on the job.

In the film, Charlie McCarthy sets out on a crusade to make folks aware of dangerous situations away from work. He urges them to be careful *all the time*, not just while they are at work. He haunts prospective accident

victims, and thereby the movie gets its arresting title.

Charlie is supported by his old friend, Edgar Bergen, and by an all-star cast. The film is in color, 16mm, and runs 28 minutes.

"Charlie's Haunt" may help you in your efforts to reduce both off-duty and on-duty accidents. We'll be glad to lend it to you free. Just call your local Bell Telephone Business Office.



BELL TELEPHONE SYSTEM

Which X Marks YOUR Spot?

46th National Safety Congress and Exposition

October 20-24, 1958

Chicago

DATE AND HOTEL ASSIGNMENTS

PLANS for the 1958 National Safety Congress are well under way. The problems of organizing the big show

are the same kind of problems, only bigger. The Congress continues to expand, making meeting room space a real headache.

The schedule for the production and distribution of the preliminary edition of the printed program calls for all program information to be in by June 15.

While it is a *preliminary* program, all concerned with setting up speeches, panels, or demonstrations are urged to have their names, facts, and dates pinned down early.

	(Hotel)	Oct. 20 Monday		Oct. 21 Tuesday		Oct. 22 Wednesday		Oct. 23 Thursday		Oct. 24 Friday
		AM	PM	AM	PM	AM	PM	AM	PM	AM
Sectional Sessions										
Aeronautical Ind.	Hilton		X				X			
Air Transport	Hilton			X						
Auto. & Mach. Shop	Congress				X				X-jt.	
Cement & Quarry	Hilton				X		X			
Chemical	La Salle		X		X		X		X-7	
Coal Mining	Hilton		X		LX		X			
Commercial Vehicle	La Salle			X	X	X	X	X-jt.	L-jt.	
Construction	Hilton		X		X					
Electrical Equip.-T.	Hilton						X		X	
Fertilizer	La Salle		X		LX					
Food	Morrison	X8			X		LX		X	
Glass & Ceramics	Congress	X			X		X			
Marine	Morrison			X	X	X	X	X	LX	
Meat Packing—Tng. & L.	Congress		X		LX					
Metals	Hilton		X		X2		L		X	
Mining	Congress		X		LX		X		X	
Occ. Health Nursing	Hilton			X		X			L	
Petroleum	Hilton		X		X2		X2		X	
Power Press	Congress						X		X-jt.	
Printing & Publ'g.	Hilton				X		X			
Public Employee	Hilton		X		X		X		X	
Public Utilities	Hilton				X				X3	
Pulp & Paper	Hilton		X		X		X5		LX3 (1 jt.)	
Railroad	Morrison				X		X		X	
Rubber	Hilton		X		LX					
Textile	La Salle				X		X			
Trades & Services	Morrison		X		X4		X			
Traffic	Congress		X	X	X	X	X	X	X	
Transit	La Salle			X	X	X	X	X-jt.	L-jt.	
Wood Products	Congress		X		X		X		X-jt.	
Divisional Sessions										
Farm	Hamilton		X	X	X	X	X	X	X	
Home	Hilton		XEve.	X		X	X	X-jt.		
Labor	Hilton			X		X		X		X
School & College	Morrison		X	X	X	X	X	X	X	
Women's Activities	Blackstone				X			X-jt.		
Youth	Hamilton		X	X	X	X	X	X	X	
A.S.S.E.—Subject Sessions										
A.S.S.E. Ann. Mtg.	Hilton			X	L					
Subject Sessions	Hilton, Congress & La Salle					X		X		X
General Sessions										
Annual Council Mtg.	Hilton	X								
Banquet	Hilton							XEve.		
Early Morn. Sess.	Hilton			X		X		X		X

X One session; X3 Three group sessions; L Luncheon; X-jt. Joint session, two or more sections.

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SAFETY SHOES FOR EVERY NEED

WIRE FROM WASHINGTON



By Harry N. Rosenfield

Washington Counsel, National Safety Council

Safety legislation has been moving through the Congress, and has also been the battleground of controversial proposals.

Highway Safety. The Roberts Subcommittee on Traffic Safety received testimony from a panel of experts, including the National Safety Council, on basic research needs in the field of traffic safety. Among the many questions discussed was the desirability of a Joint (Senate-House) Congressional Committee on Traffic Safety. The Committee also reported favorably on H. J. Res. 221 (Beamer), to grant approval to interstate compacts on highway safety. (See "Wire," May 1958).

Senator Gore, chairman of the Senate Public Roads Subcommittee, advocated Congressional consideration of a national standard of safe speed, mandatory on the interstate highway system, to be enforced by automatic radar devices which would slow cars down under dangerous conditions. "Only radical measures," he said, "offer hope of lessening the carnage of the highways." He also espoused exploring the possibility of regulating horsepower, as a safety measure.

Senator Morse stated on the floor of the Senate that "we have a moral duty to take some action to bring under check the automobile industry, which has become, perhaps, the greatest killer of innocent people in America." He called into question the "manufacturing policy" of the automobile industry and suggested a Senate investigation "with regard to the safety problems involved in the manufacture of the modern automobile." He also raised the problem of compulsory liability insurance.

The President signed into law

H.R. 9821, authorizing increased aid to states for highway construction and encouragement to regulation of billboards along the Interstate Highway System (see "Wire," May 1958). In signing this bill the President suggested amendments to the billboard provision (1) "to provide a clearer basis for administrative standards" (2) for removal of certain exceptions, and (3) to achieve a different financing pattern.

Governor Howard Pyle, of the White House staff, warned that 50,000 Americans will die in traffic in 1966 and that the cost of auto accidents would mount to \$6.3 billions annually, unless action is taken now to prevent this situation. "If we lost this many lives and property during a year of war," he said, "we would move heaven and earth to end it. Yet we ignore the traffic loss. This is crazy."

Industrial Safety. The President signed into law S. 1386, authorizing the ICC to prescribe rules, standards, and instructions for power or train brakes (See "Wire," May 1958). By Executive Order No. 10765, the President also issued regulations governing

the award of life-saving medals under the Medals of Honor Act (See "Wire," June and August, 1957). Applications for medals must be filed with the ICC.

The ICC amended its Motor Carrier Safety Regulations in the matter of inspection and maintenance, because "certain motor carriers fail to inspect and maintain motor vehicles in safe operating condition." The ICC also issued a new portion of its administrative ruling concerning the persons making safety inspections of equipment.

In a Motor Carrier Investigation Report, the ICC warned that it would seek to enforce compliance with its minimum safety regulations by all carriers subject to such regulations, even as to carriers exempt from all but safety regulations. In another such Report the ICC announced its "purpose to call upon [motor] carriers to account for failures to employ adequate means for selecting only qualified drivers, for providing supervision over the driving, loading, and the maintenance of their vehicles."

The Joint Congressional Committee on Atomic Energy held an

—To page 77

THE MONTH IN WASHINGTON

- Department of Labor proposes amendments in Child Labor Regulations broadening exemptions for student learners enrolled in cooperative vocational training programs for employment in hazardous occupations. Reasons: increased safety activities in vocational education field.

- Creation of an independent aviation agency to control both civilian and military aviation urged in Senate.

- Propose joint (Senate-House) Committee on Traffic Safety; interstate compacts on highway safety, and Congressional consideration of a national standard of safe speed on the interstate highway system to be enforced by radar.



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CONSULTATION CORNER

By L. C. Smith, Industrial Department, NSC

Got a problem in accident prevention or occupational hygiene? Questions are answered by mail, a few of general interest being selected for publication here

Safety Glasses Pit on the Inside

Question. In our shop we have a number of welding operations where the welder has to kneel and look down at the weld point. Flying particles are falling down the back of the welding mask and lodging on the safety glasses underneath.

As a result, the glasses become pitted on the inside and must be replaced every two or three weeks. Although we have not experienced any eye injuries from these particles, any suggestions you may have on the solution to this problem will be greatly appreciated.

Answer. Several suggestions should solve your problem. There is on the market a snood that can be attached to most headbands on welders' helmets. The snood is made of fire-resistive material and formed to fit over the back of the head and down the back of the neck. This device would keep sparks from falling down the back of the welding helmet.

There is also on the market a chrome leather welding helmet that will give protection from sparks of this type.

You might explore the possibilities of using a different style of welding helmet. Some are built to follow the contour of the head, and it is possible that such a helmet would solve your problem.

Safe Use of Cobalt 60

Question. We are using cobalt in our X-ray tests of steel. I understand this is a silent, tasteless, non-odorous, invisible lethal ray

that can be very dangerous if mishandled.

I know information on this subject is available from the Atomic Energy Commission at Oak Ridge, Tenn., and other sources, but I am wondering what course I should pursue to obtain this information for referral to those working with the cobalt. Also, it seems to me, we should initiate some simple rules of safety in case of an accident.

Answer. Fortunately, cobalt 60 is one of the radioactive isotopes in a solid form, not a powdery material with gaseous daughters like radium salts which can be spread over a large area in case of a mishap. Cobalt 60 has a high melting point, and ordinary fires will not cause it to melt.

However, a very large amount of activity can be present in a chunk of metal about the size of a piece of ordinary blackboard chalk. These sources have become lost or mislaid, and for this rea-



"He should see a plastic surgeon about that nose."

son it is necessary to maintain absolute inventory control of all sources, preferably by one responsible person.

The sources should never be handled directly and, depending upon their activity, they should be handled with tongs or long rods having releasable magnets or clamps on the end. It is relatively easy to calculate the length of rod needed to safely handle a specific source.


It must be remembered, however, that above certain levels of activity, remote handling is necessary. All personnel working with radioisotopes, or who might possibly receive exposures, should wear film badges and dosimeters. The film badge should be developed and the exposure evaluated at least once a month and preferably every week, if the source is used frequently.

A small portable Geiger-Mueller-type radiation-survey meter should be used to check radioactivity in the area. The radiography source should be kept in a lead pig equivalent in thickness to the lead container in which the source was shipped. The source itself should be used only in a designated area or room having concrete walls of such thickness that anyone working on the other side of the wall for eight hours would not be exposed to more than 7.5 milliroentgens per hour.

It is possible to operate in open areas only if surveys indicate the activity level beyond a certain area is negligible. If this is done, the area should be roped off, warning signs posted, and a system of red flashing lights operated while the source is in use. Radiographers should wear some kind of distinctive clothing and should be the only personnel allowed in the area, when the source is in use.

There are commercial radiographic instruments available that are well shielded and place the source in a desired location mechanically. They must also be handled carefully. In all cases, distance, time, and shielding are the three basic rules for handling radioisotopes. The farther away

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(Fiction)

The order has come from the front office, "Cut expenses!"—including the safety program. Skeptical management has given our Safety Engineer a week to prove that such a move would be a costly economy

RECESSION

By **BILL ANDREWS**

June 12, 1958

The executive committee meeting was grim.

Work has been halted on two of the six plants under construction on the project. Of the eight units in operation, two are shut down tight and two others are running at about half force. So there was recession talk and economy talk aplenty on the meeting's agenda.

Most particularly, there is a drive to pare the frills from staff services of marginal necessity.

Which means that I was confronted by a demand to curtail safety services.

They seemed a little surprised when I said, "You can't do that!"

After all, they pointed out, other overhead departments had taken cuts. Plant protection, power plant, maintenance, public relations, personnel—each of these had been cut anywhere from 10 to 50 per cent. I still said, "No."

The general superintendent leaned toward me from across the table. "Look," he said, "we're not doing anything criminal. You'll still be on the ground. Keep one of the boys with you. Spread out a little on inspections. Cut down

a little on the extras—training films, posters, travel. You'll absorb the 25 per cent cut we're asking and still keep a good safety program going. We all have to make adjustments, and none of us like it. Why should your department be an exception?"

"Because you can't possibly afford to cut the program," I replied.

The comptroller growled, "We can't afford not to cut it."

Lots of things were going through my mind as I mentally prepared my answer. Some of these things were pressuring me into compliance: my knowledge that the men around me were making departmental sacrifices; my desire to be reasonable and agreeable to the men who control my own personal job tenure and salary; my desire to be in a favorable bargaining position when expansion comes again; my knowledge that a few small economies are in fact possible because of the reduction in working force.

But there were other things in my mind: my conviction that the professional safety engineering staff was already too small for the work load; my conviction that

what prestige and influence safety work has achieved must not be lost; the sure knowledge in my own mind that curtailment by 25 per cent would mean an increase in the accident rate.

Most of all, perhaps, I was remembering back several years to another budget session in which I was "reasonable"—and my willingness to compromise cost me the respect of the best assistant I ever had—his respect and, within a few weeks, his services.

So I stuck by my position. A five per cent, maybe. But 25 per cent, no! I made it emphatic—and I was scared blue as I did so.

The faces around the table were dark. Their moods ranged from surprise, through worry, and up to anger.

The vice-president from the home office of Eastern Enterprises remained poker-faced, bland, and iron-hard.

"I don't think we made ourselves quite clear," he said. "When we invited your comments, we were not abdicating our decision-making authority."

"The cuts will have to be made. I approve of the attitude of a staff

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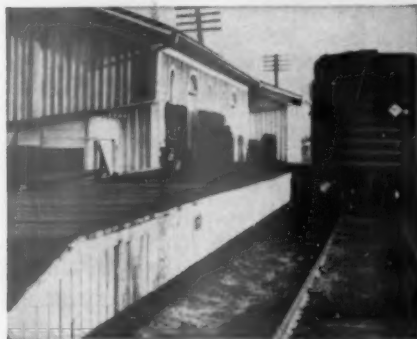


INFORMATION FOR SAFETY DIRECTORS

about improved products and new services
made possible by **DU PONT CHEMICALS**



Safe, efficient removal of scale from industrial equipment is one of the many uses of new *dry-type* acid cleaners based on Du Pont Sulfamic Acid. These mix-with-water acid cleaners do away with spilling hazards of liquid acids . . . have low corrosive action. They're available now from several suppliers.



Long-term protection against fire, termites, decay is assured when lumber is treated with Du Pont Chromated Zinc Chloride. CZC is applied in one low-cost treatment . . . permeates wood fiber. Treated lumber is clean, odorless, paintable. Du Pont does not treat wood. Service is available from lumber treaters.

DU PONT
Grasselli Chemicals



BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

National Safety News, June, 1958

HERE are ways you can get *extra value* for your purchasing dollar. These modern products, which bring new safety and efficiency to your operations, are made possible by Du Pont Chemicals used in their production.

The three shown here are examples of many new and improved products in which Du Pont Chemicals play a part. Ask your regular suppliers about them, or send the coupon below to get more information, including names of manufacturers from whom these products can be obtained.



Work clothes resist fire when treated with Du Pont "X-12" Flame Retardant. Clothes "breathe" freely, feel comfortable. Colors remain bright and good-looking. Industrial and commercial laundries apply "X-12" in an economical, one-step operation after each laundering.

Send for your free copy of the new **"INFORMATION FOR INDUSTRY"**

Specially prepared for Safety Directors . . . a complete packet of information on 9 products and services, including names of manufacturers of each. Yours for the asking . . . just fill out the coupon.

E. I. du Pont de Nemours & Co. (Inc.)
Grasselli Chemicals Dept., Room N-2533-S
Wilmington 98, Delaware

Please send me your new folder, "Information for Industry."
I'm particularly interested in the items checked:

☐ dry acid cleaners ☐ fire-retardant treatment ☐ wood protection

NAME _____

FIRM _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____



Circle Item No. 6—Reader Service Card



Rockwood WET

*gets down to
the root of
problem fires!*

The deep-seated dump or peat fire is a problem faced by many cities and towns. It's an unpleasant, often very expensive problem requiring weeks of work to extinguish. Your town is probably no exception — but you can use exceptional products to extinguish deep-seated fires — the Rockwood Bayonet Piercing Applicator and Rockwood WET. The Rockwood Bayonet Applicator helps you pierce through top layers of debris and get at the heart of the fire. Rockwood WET, a wetting agent, increases the fire extinguishing action of water — making a little water go a long way. And Rockwood WET retains its penetrating action even at high fire temperatures!

With this fire-fighting team you save water, time and quickly control smoldering fires.

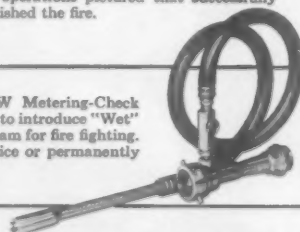
There are good reasons for you to investigate Rockwood WET and Rockwood Bayonet Applicator. So why not fill in the coupon below and let us send you full information?

Photo strip on left shows (1) Rockwood Bayonet piercing applicator ready for use (2) Rockwood Eductor and Wet feeding wetting agent solution to Bayonet Nozzle (3) Bayonet being inserted at fire location (4) Bayonet partially inserted; note, steam rising from rubble (5) wet water reaches deep seated hot spot causing steam eruption and ground depression (6) Final steam cloud as hot spot is extinguished.



Earl C. Griffith, Chief of Fire Department, of East Providence, Rhode Island, was in charge of the operations pictured that successfully extinguished the fire.

Rockwood's All-Purpose new FW Metering-Check Valve and Eductor was developed to introduce "Wet" or FOAM Liquid into a water stream for fire fighting. It can be used as a portable device or permanently installed on a fire truck.



ROCKWOOD SPRINKLER COMPANY

Engineers Water . . . to Cut Fire Losses

Distributors in all principal industrial areas

ROCKWOOD SPRINKLER COMPANY
Portable Fire Protection Division
2041 Harlow Street
Worcester 5, Massachusetts



Please send me your illustrated booklet on Rockwood fire-fighting products.

Name Title

Company

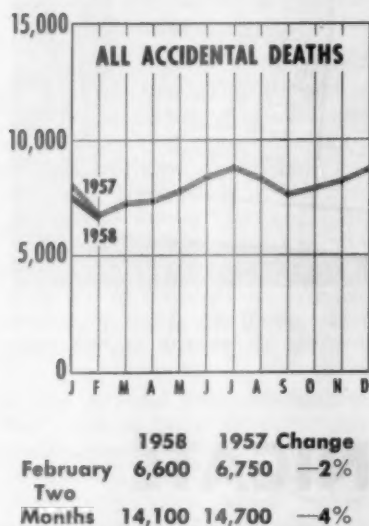
Street

City Zone State

THE ACCIDENT BAROMETER



Prepared by the Statistics Division,
National Safety Council



THE DEATH total for February was approximately 6,600, a decrease of 2 per cent from February a year ago. There were reductions in motor-vehicle and work accident fatalities and no change in home and public non-motor-vehicle deaths.

The two-month death total was 14,100, a decrease of 4 per cent from last year. Each class showed a reduction from 1957 with the greatest improvement recorded for motor-vehicle deaths.

Motor-Vehicle Deaths

The February total of motor-vehicle deaths was 2,350, a decrease of 5 per cent from 1957.

Deaths for the two months totalled 5,080, or 5 per cent below last year. The death rate per 100,000,000 vehicle miles is not available for the two-month period, but for January the rate was 5.3, a reduction of 5 per cent from 5.6 a year ago.

For the two-month period, 27 states had decreases from last year and 21 had increases. Reporting cities with populations of more than 10,000 had a reduction of 3 per cent in February, but no change for the first two months of the year.

Regional changes from 1957 in the two-month motor-vehicle death totals were:

North Atlantic+ 2%
South Atlantic-10%
North Central- 8%
South Central- 6%
Mountain- 3%
Pacific+ 2%

Work Accidents

Deaths from work accidents numbered about 1,000 in February, or 5 per cent fewer than last year. The total for two months was 2,300, a decrease of 4 per cent from 1957.

The February frequency rate per million man-hours for plants in community council contests was 4.81, a reduction of 20 per cent from last year. The February rate in 18 sectional accident-prevention contests conducted by the National Safety Council was 4.47, a decrease of 12 per cent. The two-month rate in community council contests was 4.42, down 17 per cent, while in sectional contests rate was 5.21, up 2 per cent.

Public Deaths

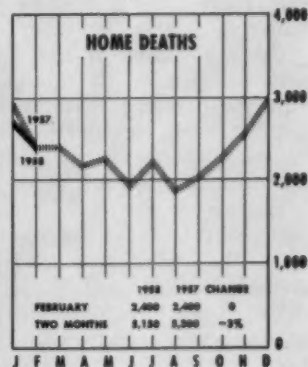
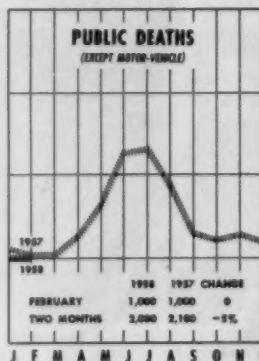
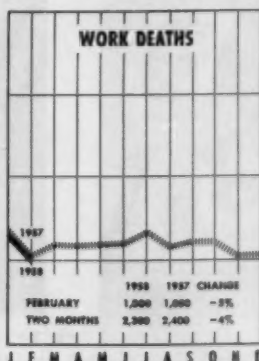
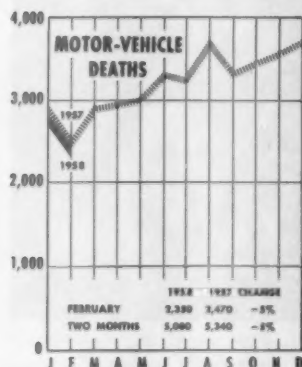
The death total for public non-motor vehicle accidents in February was 1,000, no change from 1957.

Deaths during the two months totalled about 2,000, or 5 per cent below 1957. This reduction occurred despite the fact that changes in the definition of Home have reclassified some cases to Public. There were decreases in deaths from burns, drowning, firearms, and transportation accidents and a small increase in falls. Fewer deaths were recorded for children under 15 years of age and persons 25 to 44 and 45 to 64 years old.









Home Deaths

February deaths from home accidents numbered about 2,400, or the same as last year.

The two-month death total was 5,150, a decrease of 3 per cent from 1957. There were decreases in deaths from falls and poisonings, an increase in firearms accidents, and no change in burns and mechanical suffocation. Aside from increases in deaths of children 5 to 14 years old and persons 45 to 64 years of age, all age groups showed decreases from last year.



HERE ARE THE BIG 5 POINTS:

<p style="text-align: center;">1</p> <p>LEARN THE SAFE WAY TO DO YOUR JOB. THEN ALWAYS DO IT THE SAFE WAY.</p> <p>Your supervisor is there to see that you are shown the safe way to do your job and help you with any problems you may have. He has been trained in the safe practices which apply to ACF jobs. It is his responsibility to help you work the safe way. It is your responsibility to help your supervisor. Your safety is an important part of his job too.</p> <p style="text-align: center;">SAFETY SUGGESTIONS</p> <p>ACF welcomes your suggestions as to how to prevent accidents. If you have a safety idea, talk it over with your supervisor or with the plant safety supervisor. Safety is his job. Safety is everybody's job.</p> 	<p style="text-align: center;">2</p> <p>PAY CLOSE ATTENTION TO YOUR WORK AND AVOID UNSAFE ACTS.</p> <p>Lift correctly</p>  <p>Act your age</p>  <p>Be seat</p>  <p>Hands off</p>  <p>Shut off power</p> 	<p style="text-align: center;">3</p> <p>USE THE SAFETY DEVICES AND PERSONAL PROTECTIVE EQUIPMENT REQUIRED FOR YOUR JOB.</p> <p style="text-align: center;">Dress for Safety</p> 	<p style="text-align: center;">4</p> <p>CORRECT OR REPORT AT ONCE UNSAFE CONDITIONS AND PRACTICES.</p> <p>Wear a cap</p> <p>Protect your face and eyes from flying objects and dust. Wear your cap correctly. It should be secured with a chin strap.</p> <p>Wear safety glasses</p> <p>Protect your eyes from flying objects and dust. Wear your safety glasses correctly. They should be secured with a chin strap.</p> <p>Headwear</p> <p>A helmet is required on all jobs where there is a possibility of head injury.</p> <p>Shoes</p> <p>Wear shoes that are safe and comfortable. They should be secured with a chin strap.</p> <p>Jewelry</p> <p>Remove all jewelry, including watches, before working. Jewelry can become caught in machinery.</p> <p>Gloves</p> <p>Wear gloves when handling sharp, rough or hot materials. They should be secured with a chin strap.</p> <p>Safety shoes</p> <p>Wear safety shoes on all jobs where there is a possibility of foot injury. They should be secured with a chin strap.</p>	<p style="text-align: center;">5</p> <p>IF YOU DO GET HURT, NO MATTER HOW SLIGHT THE INJURY, REPORT IT AND GO TO FIRST AID AT ONCE.</p>  <p>Help prevent fires</p> <p>Keep only 100% paper and other flammable materials in your container.</p> <p>Store solvents and other flammable materials in approved safety containers.</p> <p>Do not smoking and other "hot" work safety. Smoke only in approved locations.</p> <p>Report at once any unsafe electrical equipment.</p> <p>If a fire starts</p> <ul style="list-style-type: none"> • KEEP A COOL HEAD — DON'T PANIC • TURN ON ALARM BY ALARM BOX OR TELEPHONE • BE READY TO GIVE YOUR NAME, WHERE FIRE IS AND WHAT IS BURNING • TALK TO YOUR SUPERVISOR • NEVER RUN — GO TO YOUR SAFETY <p>Nothing is more important to any one of us than our health and physical well being. If we have these, we can do our job and enjoy the good things of life.</p>
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EMPLOYEE PUBLICATIONS are valuable allies. This spread from ACF Horizons (ACF Industries) outlines the "Big 5" essentials of safe work.

Communication, a word of many shades of meaning, has acquired a special significance in industry. It includes methods of achieving the Dale Carnegie goal of winning friends and influencing people.

It includes the development of favorable attitudes toward the employer and the safety program; there is a close connection between the two. And equally important is teaching them how to do the job—safely.

The all-important task of creating the desire to work safely and developing the ability to do so has too often been attempted haphazardly. Attaining this objective requires a carefully planned, long range communication program—one that will tell employees *why* and show them *how*.

Communication is not a one-way proposition. It should provide for two-way communication so that each employee's experience and ideas can be brought to bear on safety problems.

Barriers to effective communication fall in three main groups:

... Individuals are involved in communication, and individuals differ. They have different backgrounds, temperaments, education, personalities, education, and

COMMUNICATE with imagination

How words and pictures get
the safety message across

EYE STOPPERS



STRIKING eye pictures from CF & I Blast (Colorado Fuel & Iron Corp.). The one at the left attracted world-wide attention

experiences. This is a condition common to society.

... The company's "climate" or atmosphere may tend to hamper communication.

... Facilities for communication may be lacking or inadequate.

The problem is a big one—to reach these differing individuals largely through mass media and to find new, fresh approaches and variations for getting across the same old message.

Personal contact is the oldest method of communication and it is still one of the most effective. In industry it is most often used by the employee's immediate supervisor. He is close to the employee and knows him best.

To the average employee the supervisor is the company, so a good job of communication must be done at this level. If not, other methods will be largely ineffective.

The personal approach enables the communicator to tailor his communication to the individual. He can build up the employee's sense of prestige, which makes him receptive to instruction. It also permits giving instruction when it would be impractical to bring the group together.

Personal contact is one of the most effective ways of teaching the employee safe practices on his job. Most supervisors, too, find it easier to talk to one person than to a group.

Meetings serve a useful purpose when well planned and conducted. These range from on-the-job meetings of 5 to 10 minutes, to round-table discussions and training classes. Not every supervisor is a good speaker or conference leader but ability comes with experience. There is much good material available, but depending on canned material can be fatal to any meeting. Meetings are most useful when there is discussion from the floor, providing the leader can direct it into constructive channels.

But any program which is all talk is likely to be of limited effectiveness. The speaker may be eloquent enough to keep his audience awake throughout the

meeting, but how much of it will they remember?

Here is where visual aids come in.

A visual aid, briefly, is any device that can be seen and helps to get the message across. It should be accurate, limited to a few items, and should be large enough to be seen easily from any spot in the meeting room. It should emphasize the key points of the material being presented.

People learn more through sight than through any other sense. Hearing is next best. So any medium which appeals to both, such as sound motion pictures and slidefilms, rates high in effectiveness.

A flannelboard presentation or a blackboard in connection with a talk or discussion will have a similar effect. Sight and hearing together will cause a more vivid impression than a single sense.

A visual aid, to be effective, must become almost an extension of the individual making the presentation. After all, it is just an aid and can be no more effective than the person using it. It should emphasize the key points of the material being presented. It should not contain too many items and should be large enough to be seen easily from any part of the room.

Excellent visual aids may be prepared at small cost with a little ingenuity and planning.

Visual aids attract attention and tend to hold the interest of the audience. Some aids, particularly moving pictures, have considerable entertainment value. This is desirable but it should not dilute the impact of the message.

A well-planned flannelboard presentation also attracts attention and helps keep the interest

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WHICH VISUAL AID?

Type of Aid	Effectiveness	Audience Size*	Cost
Motion Pictures	Excellent	Large	High
Sound Slidefilms	Excellent	Large	Medium
Stripfilms	Good	Medium	Medium
Slides	Good	Medium	Low
VisualCast	Good	Medium	Medium
Opaque Projector	Fair	Small	Medium
Flannel Boards	Good	Medium	Low
Flip Charts	Good	Small	Low
Posters	Fair	Small	Low
Diagrams	Fair	Small	Low
Pictures	Good	Medium	Low
Manuals	Good	No limit	Low
Cutaways	Good	Small	Medium
Models and Mock-ups	Good	Small	Medium
Blackboard	Good	Small	Low

There is no accurate measure of the effectiveness of any visual aid in all types of training situations. The terms excellent, good, and fair are used in a general sense to rate the potential effectiveness of each.

* Audience size applies primarily to meetings and training classes. With materials used for mass distribution or bulletin board display, there is no specific limit to the audience size.



RUNWAY paving at Plattsburg, New York, Air Base is an example of the highly seasonal work that plagues the construction industry.

WE KNOW HOW, BUT...

Three types of construction firms need a change of heart before the industry's safety record can improve

By LT. COL. WINCHESTER D. BRUNIG (RET.)

Three die in ditch not safely braced

Workman killed when crane boom hits power line.

Falling scaffold brings death to two.

H EADLINES such as these are all too common. Are we doing anything about it?

We have all the knowledge necessary to prevent most of these accidents. We have standard accident prevention manuals. We have material available from proved safety programs. We have innumerable safety helps and services available from the Construction Section of the National

LT. COL. WINCHESTER D. BRUNIG (RET.) is Director of Safety, D. W. Winkelman Co., Inc., Syracuse, N. Y.

Safety Council and other safety organizations for those who will take advantage of them. We even have laws in many states requiring safety precautions.

Some construction firms are doing an excellent job of accident prevention and are richly rewarded for their efforts in many ways. Others are so well supervised by certain government agencies that the result is the same. This article is not directed toward them. It is directed toward the firms in the following categories:

1. Those who have a safety program but make no sincere effort to enforce it, who preach safety but "do not have time" during the busy construction season to do more than pay lip service to it.

2. Those who believe that their insurance company's safety engineer should bear the entire burden of accident prevention in their organization.

3. Those who believe they have made out all right for years without a safety program and refuse now to spend any effort or money on such a program.

Before we analyze these ideas, let us review the special problems in the heavy construction industry with which we must contend.

The heavy construction industry has special problems. Some of these are:

1. Seasonal, outdoor work.
2. Fixed dates for completion of work, despite possible lengthy bad weather conditions.
3. Heavy turnover of personnel

even during construction season.

4. Difficulty in getting pre-placement physical examinations.
5. Changing job sites with completion of each job and changing physical job conditions—the latter often with little or no warning.
6. Tendency toward superficial equipment inspections and hasty and improvised repairs.

With these handicaps it is easy to understand that even an excellent, well-administered safety program requires constant attention and possibly revisions. To be successful it must have the support of all higher echelons and the complete integration of accident prevention with all elements of the construction organization.

Bearing in mind our special problems, let us go back to the three categories of heavy construction contractors who are responsible for a large portion of our accidents.

Those in Category 1 have had a little accident prevention indoctrination at some company level, would like to have safe jobs, may provide some personal protective equipment, have safety meetings and may even attempt to enforce safety rules at times. Companies in this category fall short of desired accomplishment when accident prevention is most needed.

When the going is rough, accident prevention is shelved for the time being and speed of operation takes the driver's seat. It does not take long for all elements in the organization to realize the situation and accident prevention becomes a secondary consideration.

After an accident, how often have we heard words like these—"it couldn't be helped . . . time was the essence . . . we had to take a calculated risk."

The fallacy of this thinking is apparent. The final cost of the accident caused by disregard of sound safety procedures—aside from any humanitarian aspects—is frequently staggering. The sad part of all this is that in most cases the contractor either does not know or refuses to realize or admit the cost. If, after the accident, he were promptly presented a

bill that included all the costs of the accident, there would be few if any recurrences. Unfortunately, the costs are mostly hidden. The contractor's increased insurance costs do not show up in a lump sum but are often spread over all his jobs for a period of three years. Even these costs will not be included in the contractor's bills for many months. Other costs, such as for slowing down of work, training new employees, and many others, do not show up in the contractor's accounting procedure as definite costs to the job and attributable to the individual accident.

Those in Category 2, who believe their insurance companies can, unaided, handle their accident prevention problems, are laboring under a delusion. No matter how excellent the insurance company's engineers are in the specialized field of accident prevention in heavy construction, it is physically impossible for them to take the place of the contractor's own safety organizations thoroughly integrated in all phases of construction. The insurance company's accident prevention engineer is only one man—usually with a number of firms in various industries to call on. His recommendations, comments, and other helps can be of the greatest value if used in connection

with and in addition to the company's safety program, but should not under any circumstances be considered a substitute for a company's safety program.

Firms in Category 3 are usually uninformed as to the true picture of the accident costs. These firms are particularly susceptible to forgetting one or more bad jobs accident-wise, and to remembering a number of jobs where the law of averages had not yet caught up with them. Fortunately, their number is decreasing as the importance of accident prevention in construction is becoming more generally recognized throughout the industry. There are still enough of them, though, to keep the construction industry in the high accident frequency bracket.

What can we do to make some of our contractors realize where they are wrong in their attitude toward accident prevention?

1. Recommend the use of a system of realistic accident costing, including scheduled average costs for individual accidents, so that a contractor can know within a few days after the end of any month the true cost of the accidents on individual jobs.
2. Reiterate and explain the savings on insurance costs.
3. Stress strongly the humanitarian

—To page 115



CHANGING job sites with completion of each job and changing physical job conditions—often with little or no warning—are a handicap to the continuity of a safety program.



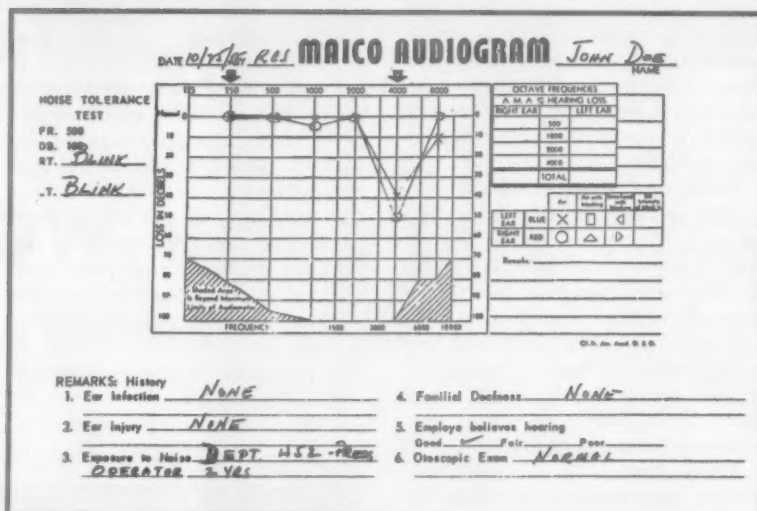
AUDIOMETRIC TESTS are made on all new employees and on all others the medical department has occasion to examine.



SURVEYS are made frequently in departments where sound is a problem.



AUDIOGRAMS have been recorded for several thousand employees. By comparing records of re-examinations with the findings of pre-placement tests it is possible to study the effects of noise.



Noise and Vibration Control ... Extra safety factors

By SAM D. FOX and FRANK H. ULM

OUR ACTION PROGRAM for the control of noise and vibration began nearly four years ago when we set up a committee of 25 persons. Included in this group were representatives from the

SAM D. FOX is with the Plant Engineering Department and FRANK H. ULM is Safety Supervisor, Delco-Remy Division, General Motors Corporation, Anderson, Ind.

staff, tool and maintenance divisions, and the machine and press room departments.

In presenting the problem to this group we stressed the fact that it was good business to do what we could toward the reduction of excessive noise.

Since then, we have tried many ideas. Some of these proved helpful; others did not. Our objective is to continue our research and, wherever possible,

install devices and make improvements that have proved practical.

In addition to noise reduction, some of these changes have brought additional benefits, such as greater die life, decreased maintenance on equipment, and less scrap.

Audiometric tests. These tests are made on all new employees and on all others we have occasion to examine. The ambient noise level in our testing rooms is well within the permissible limit of 50 db.

We now have audiograms on more than 12,000 employees which gives us an opportunity to study the effects of noise.

All tests are conducted by a registered nurse under direct supervision of our plant physician. It is expected that action by the Indiana Legislature in the near future will require that every person making tests be certified as an "industrial audiometric technician." Audiology clinics at the medical centers at Purdue and Indiana University are setting up facilities for training such personnel. Other states may be planning similar legislative action.

Surveys are made frequently in departments where noise is a problem. We use a sound meter and octave band analyzer for measuring noise in decibels and the relative amplitude of the component frequencies of a noise source. Records are kept of all studies and applications of noise reduction methods.

While our noise studies are far from complete, improvement on many operations indicate the value of our program. We believe noise reduction and vibration insulation are plus safety factors for just about any type of manufacturing.

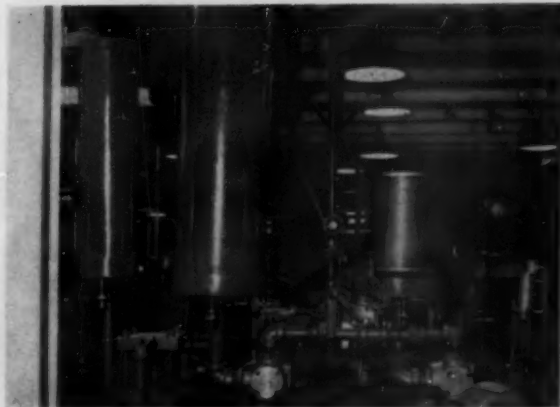
Following are some of the applications:

HOMEMADE MUFFLER



Component parts of an air muffler developed in the plant. With the exception of a 1/4-in. pipe nipple and a section of 2-in. fiberglass, this muffler, basically is made from Delco-Remy production parts. Several hundred of these have been installed on a wide variety of equipment and more are being added. Cost per muffler is 45 cents. (Sorry, Delco-Remy does not have them for sale.)

COMMERCIAL MUFFLERS



Several commercial mufflers are on the market and a few of these larger capacity types have been installed. Three have been installed on this automatic armature core builder which is an inline operation served by one air-draulic unit. The air exhaust was so intense that the air cylinder lubricating oil was exhausted, hence these sheet-metal oil guards with drain cock. The one guard was removed for this picture.

AUTOMATIC SCREW MACHINE



Six-spindle automatic screw machine equipped with Corlett-Turner silent tubes ready for production. Noise reduction has averaged 50 per cent. Operators say that equipping machines with these tubes is the finest thing that has yet been done for them. In addition to noise reduction, these tubes prevent scoring of stock due to the helically-wound wear-resistant liner which has no sharp edges. Scrap has been reduced 2 to 5 per cent on many operations.

Please turn page

FOUNDRY WHEELABRATOR



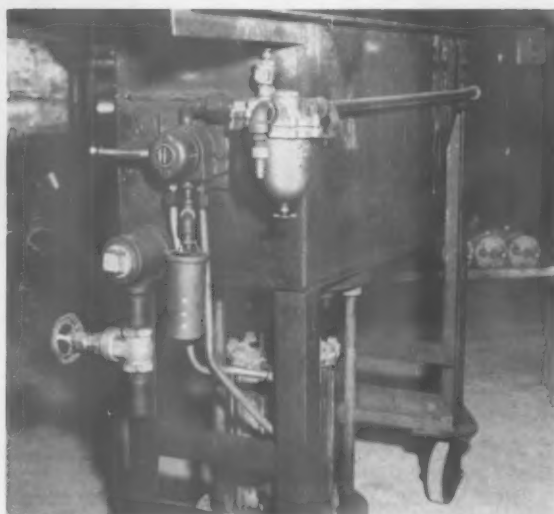
End view of foundry wheelabrator showing rubber-lined end plates. Also shown is the drop plate of $\frac{1}{2}$ -in. rubber bonded to metal. This is one of four wheelabrators so equipped. Rubber bonded to metal is used to subdue impact noise.

PADDED HOPPER



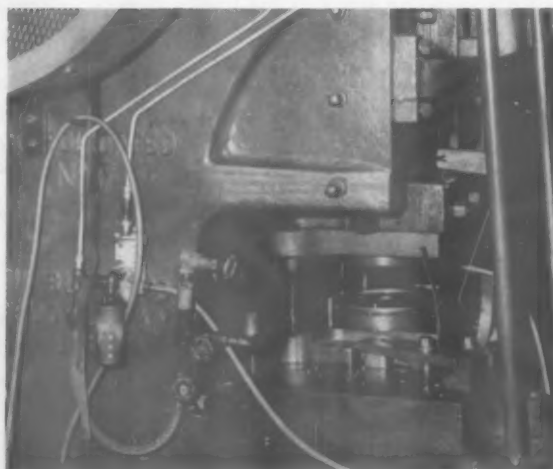
This hopper collects pole shoes from a phosphating operation. When the hopper was empty, the noise of poleshoes falling into it was very disturbing. With $\frac{1}{2}$ -in. rubber on the bottom and $\frac{1}{4}$ -in. rubber one-third way up the sides, noise was reduced below that of the background.

SOLUTION TANK



Solution tank, used by inspectors as a pressure test, is equipped with an air agitator which was very noisy. Noise was practically eliminated with the muffler.

MUFFLED PUNCH PRESS



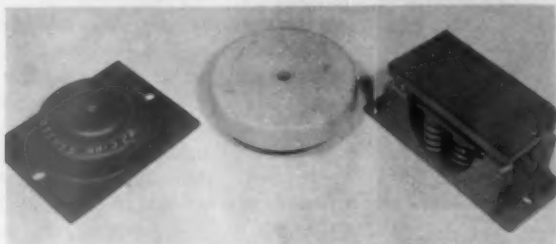
No. 7 Consolidated punch press with compressed air blow-offs for removal of parts and/or scrap. An intermittent air valve with cam mounting has been installed. Noise reduction accomplished with intermittent valve and one muffler was 40 per cent. Intermittent valve also saves 25 per cent air usage as compared with continuous blow-off.

MULTIPLE BENEFITS

In addition to reducing noise appreciably, many of the measures adopted at Delco-Remy brought such side benefits as greater die life, improved quality with less scrap, and decreased maintenance of equipment

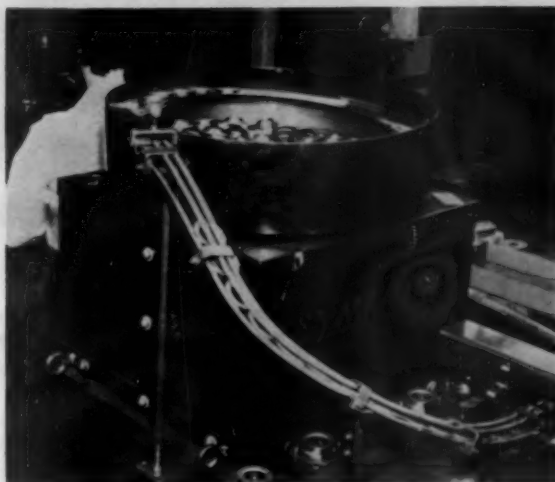


VIBRATION DAMPENERS

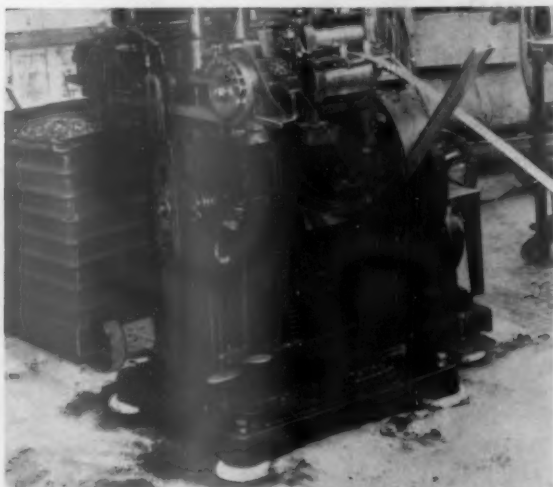


Three types of vibration dampening used at Delco. Left to right: Rubber in shear with cork snubber, neoprene in shear, and steel springs with cork snubbers.

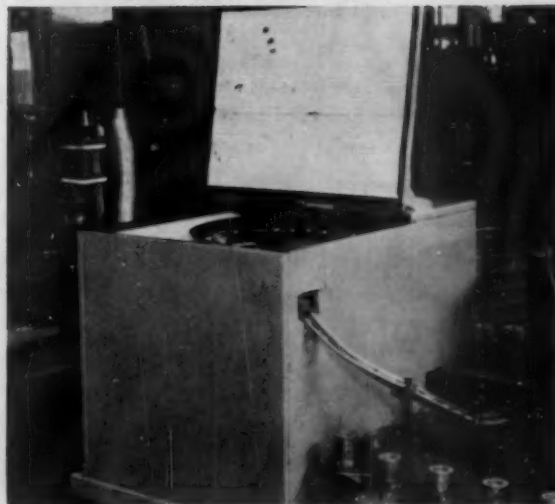
ENCLOSURE DID THE TRICK



AND AN EFFECTIVE APPLICATION



Vibration from this machine was traveling through the floor and into other machines. Dampening of this type will eventually permit trapping the machine noise by partial enclosure of the die areas or by totally enclosing the machine.



Before and after. Experimentation produced a way to quiet a syntron feeder. The parts are steel, weighing about $\frac{1}{8}$ lb. each, and are very noisy when handled. By enclosing the operation, as shown in the lower photo, noise was reduced by 75 per cent. There are about 95 syntrons in the plant, some of which are in process development.



J. R. NOVAK, radiation safety supervisor, Industrial Hygiene and Safety Division, Argonne National Laboratory, taught Site Location, Laboratory Equipment, Waste Disposal, and Decontamination. Lectures were followed by a tour of the extensive Argonne facilities where the students saw classroom principles being applied.

RADIATION — THE FOURTH "R"

Nuclear peace, as well as nuclear war, has its perils . . .
at NSC's new school, safety men learn how to control them

By **JAMES D. SAUL**

THE HISTORY of industrial safety is the story of learning to live with hazards. Fire, steam, electricity—all brought terror to men before their destructive capacities were tamed.

Man's latest source of energy, atomic radiation, is more widely misunderstood than all the previous power sources combined.

Radiation can't be seen, heard, smelled, tasted, or felt. To look into this invisible world man has had to build new instruments... instruments that can sense and warn him of the presence of this new force.

The Atomic Energy Commission licenses all users of radioisotopes. When Dan Hayes, AEC's top safety man, saw the need for radiation safety training among

AEC licensees, he turned to the National Safety Council. Mr. Hayes asked the Council to set up a training program for safety men who are taking on radiation safety responsibilities.

The Council's training director, Glenn F. Griffin, made careful preparations. He was fortunate in that Ed Alpaugh, NSC's Industrial Hygiene Director, had a thorough background in nuclear radiation. Alpaugh later directed the course.

Griffin investigated other courses. He especially liked the firefighting radiation safety course taught by F. L. Brannigan, a former New York City firefighter who now works for the Safety and Fire Protection Branch of the Atomic Energy Commission.

Griffin enrolled in the course to get a newcomer's-eye-view of radiation safety.

After extensive consultation with the health physicists of the Industrial Hygiene and Safety Division of Argonne National Laboratory, the National Safety Council began planning the course. Mr. Brannigan was active in the planning stages.

When the plans were complete, they were submitted to the Industrial Training Committee and to the Nuclear Energy Committee of the Industrial Conference.

With the approval of these experts, the course was announced to the membership. Applications soon poured in.

Mr. Griffin insisted that enrollment be limited to 20, and on

March 31, the first 20 students showed up at NSC headquarters for "Fundamentals of Radiation Safety."

The class got a lively introduction to the subject from Mr. Brannigan. He has the rare ability to present a technical subject entertainingly. Warning his hearers that one of their main problems was overcoming misconceptions, he said: "Everybody thinks that anything atomic, whether it's a big, sluggish reactor, or a little vial of radioisotopes, is ready to blow up and go 'geschpritzen' all over the neighborhood."

Mr. Brannigan pointed out that since the "atomic age" began, exactly two workers have been killed by radiation. Both were scientists, and both men were doing jobs that now are done by remote control. During the same period, 200 workers have been killed by the force of gravity in atomic installations. Atomic radiation safety men all have a stock of injury stories about people who go to work around a radioactive source full of apprehension about radiation, then get banged up in some old-fashioned way.

The students learned that radioactivity, in spite of the misplaced emphasis on its dangers, is one of the easiest hazards to deal with. It can be predicted, it can be measured on a continuous basis, and shielding can be set up.

Some of the topics covered in the course are: How to Present Basic Radiation Safety to Em-

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STUDENTS WERE ASKED:

How will you put this information to work?

THEIR ANSWERS:

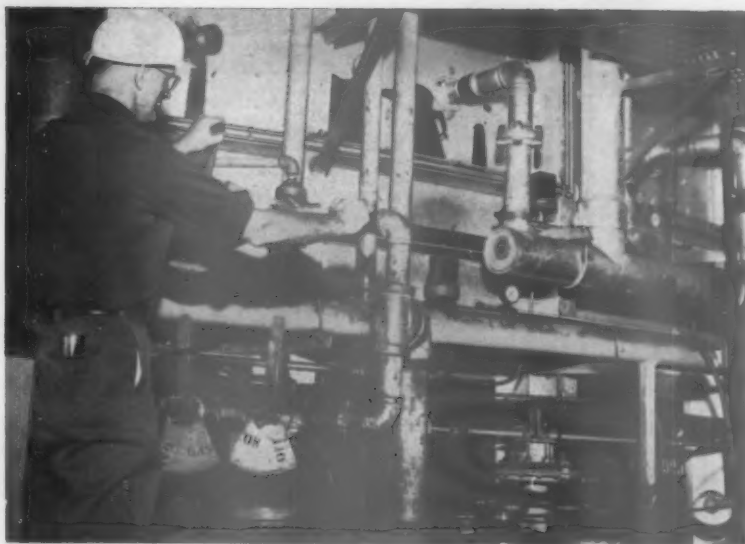
- " . . . helping the legislature write new radiation safety laws."
- " . . . our problem is not as serious as I originally thought . . . it appears that informing our employees will be our main problem . . . information as to methods of handling our [radioactive] sources is invaluable, and involves relatively few people."
- " . . . must present this material to numerous groups, most of whom have a hazy knowledge and many misconceptions . . . must teach them a proper respect for radioactive materials without misleading them into unreasonable fear."
- " . . . we use radioactive isotopes . . . I must set up standards and safe operating practices."
- " . . . general education . . . possibility of future work with radioactive materials."
- " . . . many of those I deal with are responsible for safety in using these isotopes . . . their knowledge is limited . . . I must advise them."
- " . . . a final polish for our Health Physics program."
- " . . . to learn of hazards and liabilities in use of nuclear energy."
- " . . . we have some radioactivity associated with microwave and vacuum tubes . . . some states are introducing new laws which require a knowledge of the subject."
- " . . . we handle uranium hexafluoride."
- " . . . as advisory safety member on Radioisotope Committee (required by AEC), I hope to be able to better suggest plans for the controls on our radiological experiments."
- " . . . safety and to draft a public relations presentation."
- " . . . my interest is in use of isotopes and high energy equipment in materials research."
- " . . . set up radiation safety programs."
- " . . . we have external exposure from sealed sources . . . we needed more information on instruments used in radiation safety."



CARROLL D. HAMPLEMAN (without coat), shows students how to operate a survey meter for area monitoring for beta-gamma radiation. Students are taking turns with meter.



CALIBRATION of a Geiger-Mueller survey meter was part of the course work. Students formed into four groups to take each of the practical exercises with close instruction.



FM COCKS on this heat-treat furnace at automobile plant insure against premature admission of gas to open burner cocks. In lighting off, gas flows through all cocks by way of side ports and operates the checking pressure switch. If even one cock is slightly opened, switch cannot function and main gas valve cannot be operated.

"Lighting-Off" Explosions

By J. B. SMITH

A RECENT study of 83 fuel explosions at heat-treat furnaces over a 10-year period showed that 40 occurred during lighting-off. Of the 40, at least 25 were caused by one or more burner cocks being accidentally left open when the main gas valve was turned on.

All of these accidents were preventable. The problem is, of course, the human factor. Industrial boiler and furnace operation, depending as it does upon human operators, will never be entirely foolproof.

This article will describe a gas safety control system developed by the Factory Mutual Engineering Division Laboratories of the Associated Factory Mutual Fire Insurance Companies. Currently in use in many Factory Mutual plants, it provides a simple, efficient safeguard against one of the primary causes of such explosions: premature admission of gas to open burner cocks.

The FM Cock Safety Control System. One type of system is de-

signed around three important units: a special gas cock, a checking pressure switch and an electric safety shutoff valve on the main gas line.

The FM cock is similar to normal gas cocks, except that it is equipped with two side outlets which furnish a small independent passageway that is open only after the main gas passage is completely closed. The cock is constructed with a narrow keyway that permits either gas flow to the burners or flow through the side outlets, but not both.

This construction feature is important. It is gas or compressed air, supplied through the side ports of the cock, which furnishes pressure to energize the valve on the main gas line. This energizing force cannot reach the switch unless all burner cocks are turned off, owing to interior cock construction. It is therefore impossible to open the main gas valve unless the burner cocks are fully closed.

Cocks for this purpose are manufactured to particularly close specifications. In sizes up to 2 in., Factory Mutual approved cocks

are manufactured by D. T. Williams Valve Co., Cincinnati, and W. J. Schoenberger Co., Cleveland. In sizes from 2½ in. to 6 in., the only Factory Mutual approved cock is the Nordstrom lubricated plug cock, manufactured by Rockwell Manufacturing Co., Pittsburgh. All cocks are equipped with integral handles and are suitable for manufactured, natural, pro-



COCK used on furnace control system. Integral handle shows position of cock which should be fully closed. Gas flows through side ports to operate switch.

J. B. SMITH is Chief Engineer, Factory Mutual Engineering Division, Norwood, Mass.

pane, and butane gases. The integral handles, combined with the quarter-turn (90 degree) operation of the cocks provide a visual check on cock position in addition to interior construction safeguards.

Cocks Connected in Series. The side ports of all cocks are connected in series with copper tubing. In a typical application where gas is used as the checking medium, one end of the line of tubing is connected to the main gas line on the upstream side of the main shutoff valve, the other to the checking pressure switch.

In lighting off, the operator first turns gas into the small tubing connecting the cock side ports. If the cocks are fully closed as they should be, gas flows through all cocks by way of the side ports and operates the checking pressure switch. This energizes the electric safety shutoff valve on the main gas line so that the operator can open it, which must be done by hand.

As soon as the electric valve is opened, gas flows into the burner piping and operates a low-gas-pressure switch which "shunts out" the checking switch. This second switch keeps the electric valve from closing when the individual cocks are opened to light the burners. It also furnishes the usual protection in case of gas pressure failure, being set to trip the main safety shutoff valve in the event of dangerously low gas pressure.

A bleed orifice is required at the end of the line of tubing. It

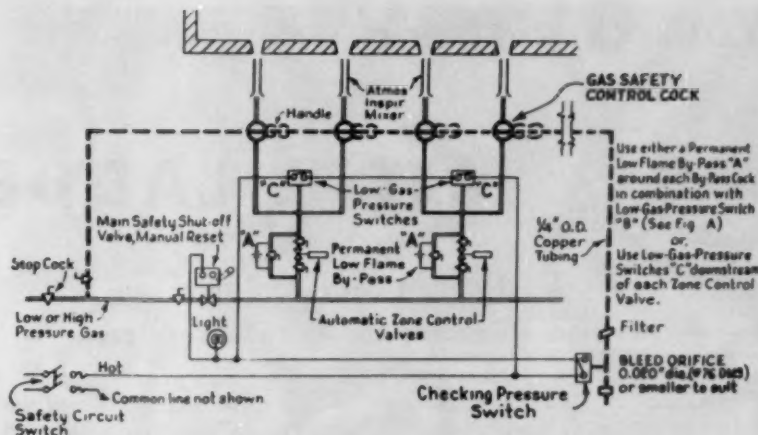


FIGURE 2. In a combustion air blower system—found most frequently in industrial gas furnace systems—the checking pressure switch is operated by air pressure.

must be small enough to prevent gas escaping into the room at dangerous rates, and to allow pressure to build up and close the checking pressure switch promptly if there is a free passageway through the checking tubing, yet large enough to quickly relieve pressure and reopen the checking switch so as to transfer supervision to the low-gas-pressure switch.

Combustion Air Blower Application. In a combustion air blower system—the arrangement most frequently encountered in industrial plants—the checking pressure switch is operated by air pressure (Figure 1). A third pressure switch provides protection against failure of combustion air pressure, as well as assurance that the combustion air blower

will be started in proper sequence when lighting-off.

The low-gas-pressure switch should be located in the burner gas piping so that there is no valve which can form a gas-tight barrier between it and the cocks. If such a valve is present, an additional pressure switch or a bypass around the valve may be required.

Where automatic temperature control is by "high-low" or modulating zone control valves in the gas piping (Figure 2), it is customary to provide a shutoff cock on each side of each control valve to permit its removal for repairs. A valved bypass is also provided around each control valve to permit burner operation meanwhile. At such installations either a permanent flame bypass is required around the valve in the bypass line or an additional pressure switch downstream of the zone control valve. The contacts of these low-gas-pressure switches should be wired in series.

Occasionally on new multi-burner equipment, and more frequently on older furnaces and ovens, the temperature is automatically maintained by zone control valves firing "on-off" with a continuous pilot at each burner. When such equipment is shut down, pressure trapped between the closed main safety shutoff valve and closed zone control valves would hold the low-gas-

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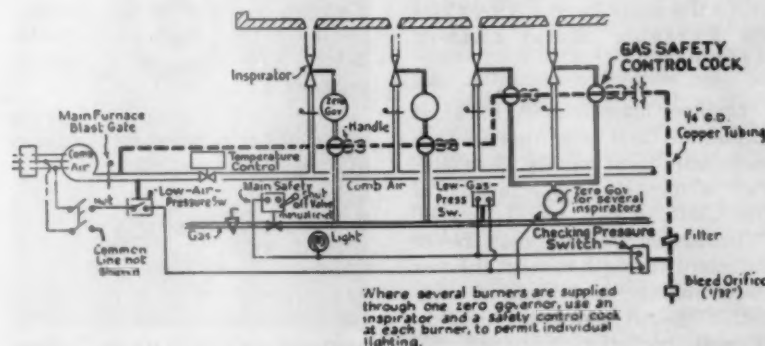


FIGURE 1. Where temperature regulation is attained by "high-low" or modulating zone control valves, a shut-off cock is usually provided on each side of control to permit removal for repairs. Valved bypasses permit burner operation to continue.

You can depend on

METAL LADDERS

Strong, light-weight alloys and rigid construction standards mean safe service

LADDERS of light metal have come into wide use in industrial and mercantile establishments and in homes. They can be obtained from hardware stores and mail-order houses, as well as from industrial distributors.

Shortly after World War II, these ladders began to appear on the market in quantities. Their lightness and resistance to weather appealed to purchasers who

thought these qualities worth the extra cost, as compared with wood ladders.

But some of these ladders were made to sell at a price. In 1948 the National Safety Council issued a bulletin, *Aluminum and Other Metal Ladders*, calling attention to details to look for when purchasing.

The bulletin itemized common defects in early metal ladders: channel-shaped side rails with sharp edges; slippery treads, and treads with burrs and sharp edges; and soft aluminum rivets that would bend under heavy loads. Methods of manufacture and use had not yet been standardized.

Another reason for this bulletin was to warn users against hazards of using metal ladders near electrical circuits where the ladders might come in contact with such circuits. Many cases of electrocution through contact with electrical circuits have been reported.

An important progressive step was the organization in 1949 of the Metal Ladder Manufacturers Association. This was followed in 1950 by publication of a *Code for Metal Ladders*, which later provided the basis for the ASA Code for Portable Metal Ladders, A14.2-1956.

Ladder materials. Alloys of aluminum and magnesium are commonly used metals. No material is mentioned specifically in the Code, which merely states: "The metal selected shall be of sufficient strength to meet the test requirements, and shall be protected against corrosion unless inherently corrosion-resistant."

Magnesium is about one-third lighter than aluminum and somewhat more expensive. Both metals



PRACTICALLY every type of ladder is now available in light-metal construction. This platform ladder is useful for a wide variety of jobs around the plant.

in the alloys commonly used are attacked by acids, and aluminum is not resistant to strong alkalis. For such exposures, a coating of asphalt or varnish is recommended.

Types of ladders. Practically every type of ladder available in wood can also be obtained in light metal. These include: stepladder, single ladder, extension ladder, platform ladder, section ladder, trestle ladder, extension trestle ladder, and a variety of special-purpose ladders.

Metal scaffold planks and swing stages are also useful for painting, maintenance, repairing, and cleaning.

A useful type of ladder for maintenance jobs and reaching high shelves and bins in warehouses and stockrooms is the "safety-step" ladder, available in aluminum and steel with up to 12 steps. It has casters for easy movement and rubber-tipped feet which grip the floor when in use.



EXTENSION LADDERS in light metal (aluminum and magnesium alloys) are available in lengths up to 60 ft. (R. D. Werner Co.)

Larger sizes (more than five steps) of this type ladder have a guard rail around the top step and hand rails. Treads are of grating or ribbed rubber.

With a larger working platform the ladder becomes a portable work stand—a cross between a ladder and a scaffold.

Maintenance. Metal ladders are built to stand heavy duty, but this does not include mishandling. They should not be subjected to unnecessary dropping or jarring. They should be stored on racks designed to protect them when not in use. There should be enough supporting points to prevent excessive sagging.

Ladders transported on trucks should be properly supported. Supporting points should be of softer material, such as hardwood or rubber-covered iron pipe, to minimize chafing and effects of road shock.

Exposure to fire. Metal ladders are resistant to reasonable changes of temperature and humidity. However, when exposed to excessive heat, as in the case of fire, the ladder should be examined visually for damage and tested for deflection and strength characteristics. If in doubt about the condition of a ladder, consult the manufacturer.

Defective ladders should be marked and taken out of service until repaired or condemned by



WITH ANY kind of ladder the same safe practices apply. One of them is to face the ladder when climbing or descending. (R. D. Werner Co.)



MANY special types of metal ladders have been developed. This pyramid platform ladder has anti-slip treads, railing around platform and at sides. Casters permit easy movement and rubber-tipped feet hold it firmly in place while work is done. (Ballymore Co.)

the maintenance department or the manufacturer.

Corrosive exposures. Aluminum and magnesium are not damaged by normal atmospheres—those free from acids, alkalis, and chlorides. Gray oxide which forms on the metal acts as a protective coating. Although resistance may be increased by coating with asphalt or varnish, it might be better to consult the manufacturer or distributor about the choice of a metal or wood ladder. Many firms sell both kinds of ladders.

Specifications. Only general design and construction requirements are given in the Code. Construction details of various types of ladders, with dimensions, weight, strength, and other de-

tails will be supplied by manufacturers.

Tests are of doubtful value to the user. But if you're interested, you will find directions in the Code.

Use of Ladders

Whatever type of ladder you select for the job, safety will still depend largely on how the ladder is used. First of all, be sure it is equipped with ladder shoes suitable for conditions underfoot. There may even be conditions where it is advisable to have somebody on the ground to hold the ladder.

Next, see that the ladder is set up at the correct pitch. Place the base of the ladder a distance from

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IDEAS THAT WORKED

Devices and Ideas to Help Your Safety Program

By Arthur S. Kelly, Industrial Department, NSC

No Stapled Fingers

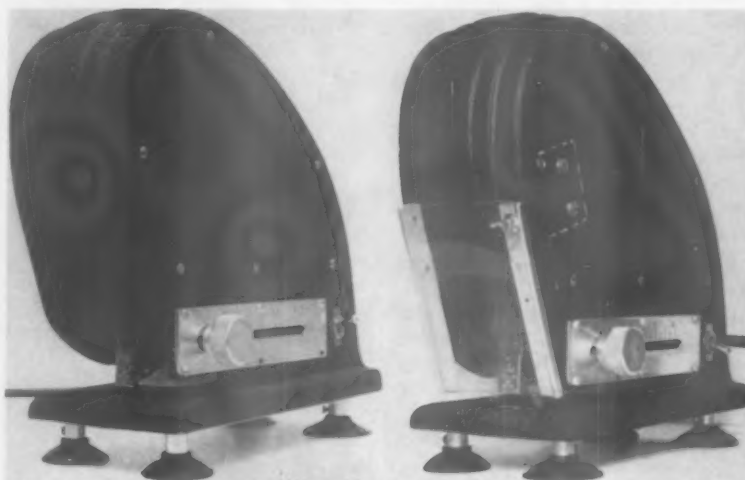
Ordinarily a stapling machine is not considered hazardous but an electric powered machine is something else. In addition to the danger of fingers being caught under the stapling head while working normally, there is also the danger of finger injuries due to hitting the trip lever when reloading the machine with the snap switch in the "on" position.

The guard is made from 1/8-in. sheet plastic installed in guide strips over the exposed front opening of the machine and completely closes the opening with the exception of a 1/4-in. space for normal stapling operations. To completely de-energize the machine when the guard is raised or removed, the wing bolt fastening the plastic guard in operating position must be removed. The wing bolt extends inside the housing of the machine and activates a normally open Micro-switch (note dotted lines shown on side of machine) hooked in series with the snap switch on the side of machine. When the wing bolt is removed, the machine is de-energized, the guard can be raised and work performed safely at the point of operation without danger of injury to hands.

Submitted from the Bethlehem Plant, Bethlehem Steel Company.

Winner For May

May's winner was "Tilt!" This idea was submitted by Lyndall Grosch, safety engineer, J. F. Queeny Plant, Monsanto Chemical Co., St. Louis, Mo. Mr. Grosch's entry was a device made from an old pinball machine that allowed employees to play a Game of Chance, and take all their risks with flashing lights rather than life and limb.



UNGUARDED

GUARDED

In Their Hands

When a safety committee puts its collective mind to a problem, it can be most effective, as we have reported here a number of times. Here is a new Safety Poker game to keep employees' minds on the prevention of accidents.

Using National Safety Council playing cards, the William Brand and Company, Inc., Willimantic, Conn., developed a game as follows: the cards used, in addition to the ordinary playing card designation of number of suit, include a cartoon illustrating a safety idea or slogan. Seven cards are given to each employee over a period of five weeks. Two cards are given on Monday of the first and third weeks and one card on the second, fourth, and fifth weeks.

In this particular case two plants were involved and were divided into six sections. In some instances an entire section represented only one department. In other instances operations were combined in order to make a

group comparable from a competitive standpoint.

At the end of three weeks many employees will have five cards (see Penalties, following) and the person in each of the six sections holding the best poker hand will receive a gift prize valued at \$7 to \$9.

At the end of the five-week period, the best "poker hand" in the plant receives a prize ranging in value from \$22 to \$30 and the second best poker hand in the plant receives a prize ranging in value from \$14 to \$17. If the winning employee prefers he may have cash.

PENALTIES

1. A major* first aid case penalizes all employees in the section concerned one card selected at random by the distributor. The penalty is exacted only after the cards have been distributed.
*This excludes minor injuries as classified by "First Aid Rules."
2. An injury requiring a physician's attention penalizes all employees on the shift during which the injury occurs two cards, and all other employees in the same section one card.
3. A disabling injury penalizes all

the employees in an entire section two cards.

4. If an employee fails to report a first aid case, all employees in his section are penalized one card.
5. Any person absent on Monday, when cards are distributed, receives no card for that week.
6. No one person can lose more than three cards in any one week.
7. Any employee losing a card must play out the contest without it.
8. Anyone not returning all his cards at the end of the five-week contest is eliminated from the following contest.

The record of every card issued is maintained to discourage any employee swapping cards to make "a deal."

A transferred employee takes to his new assignment any cards he may have been issued, but he is immediately subject to any penalties for the new shift or section when the cards are distributed the next time.

A chart is displayed in the plant showing each section's record of major first aid cases.

It is easy to see the high potential of disapproval all employees of a shift or section would have for penalizing injuries resulting from careless acts, poor attitude, or failure to cooperate.

Since penalties are levied only after cards are distributed, all employees receiving penalties can know what their hands might have been.

Submitted by Paul A. Touchette, personnel manager.

Every Day Is Tag Day

Out in Denver, Phil Lasher, superintendent of the Gates Rubber Company's Belt Division, was trying to find some new, effective approach to preventing accidents in his division. In considering this problem, he thought of the Boy Scouts and their slogan, "Do A Good Turn Daily," and of the Boy Scout Badge.

Out of this line of thinking came the idea reproduced here. Every foreman is given one of the little tags shown above. A foreman must wear the tag in his lapel or attached to his shirt pocket until he has done something specific for plant safety that day. When he has complied, he may remove the tag, but he must write a report of what he did on

the tag. At the end of the day, the foremen turn in their tags to the superintendent. Superintendent Lasher also wears a tag until he has done something specific for safety each day.

The plan has been most effective. If a foreman is still wearing his tag a few hours after the shift begins, everyone, including that foreman, knows that he hasn't done his safety deed for the day. The tag is a constant reminder to the foreman to do something. In fact, the foreman is literally

forced to find something to correct or to improve.

The foremen like the idea and so do the employees. This idea has shown results on their accident experience. In 1956, the Belt Division had a frequency of 1.04. In 1957, the frequency almost doubled to 2.05. It was at this point that Superintendent Lasher thought of his idea.

During the first four months the tag idea was in use, the Belt Division worked over 304,000 man-hours without a disabling injury.



"ASK AND YOU WILL RECEIVE"

A. S. K. is ASKing you to send in ideas that worked to be published in "Ideas That Worked."

Here's one way to beat the high cost of living.

Need a new pup tent? Battery charger? Attache case? Put that cash away. Send your "Idea That Worked" to me and win your prize. Where else can you get a 100 per cent discount?

A. S. KELLY

89 NEW PRIZES FOR IDEAS!

Winners of NSC monthly and semi-annual "best ideas" contests now can select one of 89 new prizes, including a personalized copy of the *Accident Prevention Manual*, from a list of individualized home, recreation, and sport items. Value of the awards remains the same as in previous competitions. For the best idea printed monthly, we will present \$15 worth of merchandise. Prizes totaling \$25 will go every six months to the best of the monthly winners.

Monthly awards now available include clothing accessories, tool attachments, and carving sets, plus electric wall clocks, picnic utensils, pup tents and fishing reels. Six-month prizes range from electric shavers and skillets, attaché cases, and automatic coffee makers to golf bags, plastic wading pools, and battery chargers.

Send a brief description with a photo or drawing to "Ideas That Worked," National Safety Council, 425 N. Michigan Ave., Chicago 11. Any program or safety promotion idea, gadget, or home-grown invention that prevents accidents in your plant is eligible.



PART OF the faculty poses on the steps of the Chemistry Building at Argonne National Laboratory. In front: John R. Novak, Glenn Griffin, John F. Ege, Jr., and Max McKenzie. Second row: Ed Alpaugh and Gerald T. Loneragan. Top: Pete Tedeschi. All except Griffin and Alpaugh (of NSC) are members of Argonne's Industrial Hygiene and Safety Division. Ege is director of the Division.

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employees, External Exposure, Internal Exposure, Source Handling, Radiation Monitoring, Air Sampling, Stack Monitoring, Site

Location, Laboratory Equipment, Waste Disposal, Decontamination, Shielding, Instrumentation, and A Safety Engineer Looks at Radiation Problems.

Course Highlights

How to Present Basic Radiation Safety to Employees. The employee does not have to know atomic physics to know radiation safety procedures. It is fairly simple to learn the problems of radiation, and what to do about them. All radiation can damage the body—no one is going to believe that radiation is harmless. The way to present the subject is to point out that the hazard can be controlled, and that within limits, the body can repair the damage. Exposure should be calculated against the good to be accomplished.

An interesting statistic about radiation deaths is this: since the discovery of radium, about two pounds of the element has killed 100 people. Of course, it was handled as if it were harmless. Atomic plants in recent years have processed radioactive materials equal in radiation to that which would be emitted by tons of radium. The difference has been in the respect shown the hazard.

External Exposure. It is important to distinguish between external and internal radiation. Time, distance, and shielding can protect against external radiation.

Internal Exposure. Protection against internal radiation is a tougher job. One of the worst cases on record was caused by a pinprick from a pair of tweezers. A



BOB WHEELER (at blackboard), of the Industrial Hygiene and Safety Division at Argonne National Laboratory, conducted the exercises in shielding. Students are calculating shielding thicknesses and materials for various exposures.



TO COUNT the normal background radioactivity, the students drew four cubic meters of air through a filter paper attached to a specially-fitted household vacuum cleaner, then made counts for alpha, beta, and gamma radiation.



"... **THERE** was this one incident where the workmen had the best of intentions. They took off their contaminated work clothing, and wiped down all the machinery with it."



"... **PRE-PLAN** for the accident that might happen, and you won't be following the old Navy motto: 'When in danger or in doubt, run in circles, scream and shout.'"

worker can avoid contamination through the lungs when he knows he has a release by holding his breath and leaving the area.

Monitoring and Sampling. When checking for excess activity, it is as important to find nothing as it is to find something. This isn't as paradoxical as it first seems. The first question asked after a spill is: "When did you last survey, and what did you find?"

Monitoring is checking on a routine basis for *settled* radioactive dust. Air sampling is the term used for checking particulate matter in the air. If the sample exceeds the normal background count, immediate follow-up is the next order of business.

Monitoring and sampling prevent overexposure, minimize exposure, and prevent spread of contamination. We are concerned with the undesirable effects of radiation on equipment as well as on personnel.

An example of the value of routine monitoring was the case of the "hot" blotting paper. ("Hot" is a vague term not in good repute among precise writers). A scientist who didn't want to be bothered with constant decontamination of his work surface decided to use blotting paper to catch spills. He first performed a carefully designed experiment to prove that blotting paper would hold the ra-

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"... **IN** making an atmospheric background count, don't be fooled by the normal radon daughter products."



"... **CHECK** up on your record-keeping procedure. It's useless to make tests if you don't know what the results mean. Spike a sample now and then to check your readings."



"... **THIS REACTOR** has 35 safety circuits, and any one will shut it down if it gets too hot, or heats too fast. The problem is not it's running away, but keeping it running."



SCOUTMASTER Tom McCartney discusses outdoor safety with part of 80 adult leaders and scouts at Camp Kiwanis near Weirton. Outdoor, traffic, and home safety are three phases of the nine-month project.

Doing Their Safety Good Turn

AS PART of a local effort to participate in scouting's nationwide "Safety Good Turn for 1958" campaign, more than 1,000 adult leaders and youths in the Weir-Cove District of West Virginia have completed Phase 1 of a nine-month safety project that is to extend through November. This activity dovetails with scouting's national four-year theme, "Onward for God and My Country."

The first phase started in March and stressed traffic safety until the end of May. From June through the summer months Phase 2 will emphasize outdoor safety. The campaign concludes with home-safety promotion September through November in Phase 3.

As it completes each phase, a scouting unit receives an attractive seal for its safety shield.

Led by C. B. Dodd, president of the West Virginia Safety Council, and Weirton Mayor Sam Kusic, the nine-month effort actually began in early February. A kickoff program, featuring city and county officials, inaugurated the campaign, which is specifically aimed at the 364 adult leaders and 726 scouts in the district.

Since many of the firm's workers participate in scouting, the Weirton Steel Company has highlighted in its *Employees Bulletin* annual scouting issue, this local contribution to the nationwide "Live for Tomorrow" crusade.

Assisting in this safety project across the country are such organizations as the Federal Civil Defense Administration, the American Red Cross, and the National Safety Council.

In addition to combating statistics which say accidents claim the life of a young American of scouting age every two hours, the campaign hopes to enlist help for local scouting activities.



BERNARD KELLY, Weirton Steel Company plant safety manager, right, directs "Safety Good Turn for 1958" program in Weir-Cove District. Members of his committee are: Weirton Police Chief Dave Reese, Fire Chief John Ferguson, and Scout Councilor James Longacre, Jr., Weirton Steel engineer.



CUB SCOUTS of Pack 130 visit Weirton Fire Department to learn more about fire safety. At right rear are Cubmaster Ralph Hudgins and Committeeman Howard Ferguson, both of Weirton Steel.

UPSETTERS

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425 North Michigan Avenue, Chicago 11

1. The horizontal forging machine, more commonly known as the upsetter, is used principally to forge hot bar stock, usually round, into a great many forms. On this machine, the bars can be forged or upset precisely with little or no flash.

2. Upsetters present many of the mechanical, handling, and operating hazards associated with other machines in heavy industry. They are frequently located in areas with heavy truck and crane traffic so the operators and others working nearby are exposed, not only to the upsetters, but also to moving vehicles and heavy parts in transit. The most serious safety problems are encountered in the changing of dies.

Guarding

3. The upsetter, except for the feeding area, should be completely enclosed. Heavy wire mesh or expanded or sheet metal reinforced with structural steel will give a strong, rigid enclosure. Doors can be cut into the enclosure so the flywheel, brake, and other moving parts can be serviced and the machine lubricated.

4. A guard should be installed over the operating pedal to prevent accidental tripping.

Auxiliary Devices, Equipment

5. Devices which are essential operating parts of the machine, such as stock gauges, should be designed for the particular job. Convenience and safety in mak-

This Data Sheet is one of a series published by the National Safety Council, reflecting experience from many sources. Not every acceptable procedure is necessarily included. Data Sheets should not be confused with American Standard Safety Codes, federal laws, insurance requirements, state laws, rules and regulations, or municipal ordinances.

ing adjustments are important considerations of design.

6. There are three basic types of stock gauges: the front gauge (locates and swings away), the backstop gauge (locates and helps hold the stock fixed), and the special tong gauge or finger gauge (locates and helps control the stock).

7. The jaws of tongs should conform to the shape of the stock being handled. The tongs should be made of tough, low-carbon steel so they will not harden from repeated quenching in water.

8. Balancers are used to counterbalance the weight of the forgings and, thereby, reduce operator fatigue. Balancers should be kept in good working order and used in the correct weight range. On light forgings, a balancer may prove more a handicap than an aid.

9. Oil swabs and scale removers should have handles long enough to enable the operator to reach the full length of the dies without having to put his hand or arm



Figure 1. Air-clutch-operated upsetter (horizontal forging machine) before installation of guard enclosure.

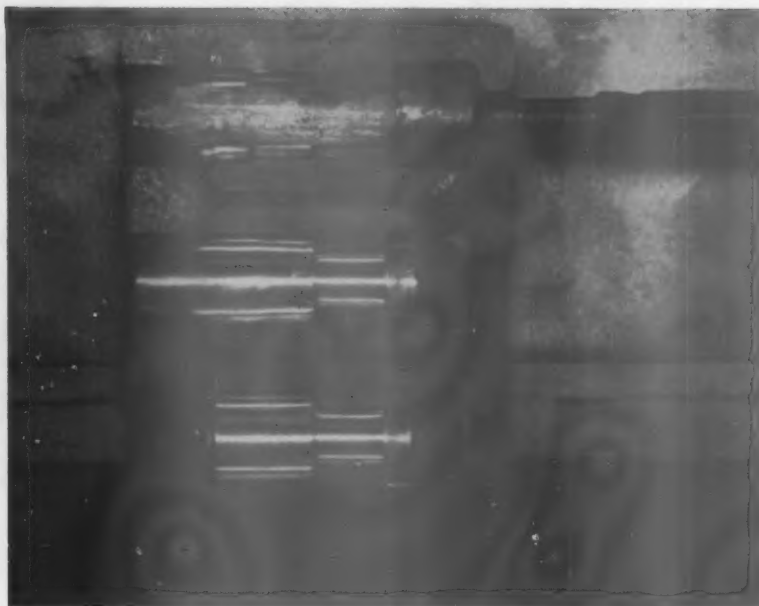


Figure 2. A special tong gauge, acting as part of the die, totally encloses a section of shaft of the stock to be upset. The stock is too short in front to permit use of a front gauge and is too short in the shaft to permit use of a backstop gauge.

between them while lubricating or cleaning them.

10. If the operator has to handle tools and equipment which are heavy and awkward, a swivel crane or chain fall should be installed in a location convenient for him.

11. Air lines, electrical lines, water and oil lines should have distinctly-marked shutoffs, safety valves, or switches, located in a place convenient for the operator.

Safe Operation

12. For operation under the safest conditions, the upsetter and the surrounding area should be kept clean and clear of obstructions and litter. It is especially important that the top of the machine be free of objects, such as loose bolts, bars, nuts, or shims, which might fall into it or from it.

13. The power should always be shut off with the main power switch locked out and the fly-wheel stopped before the operator attempts to adjust dies, heading tools, stock gauges, or backstops.

14. Wrenches and other tools should be kept in good condition.

A complete set of wrenches to fit all sizes of bolts or nuts on the machine should be provided and used. Makeshift wrenches with pipes added for leverage are hazardous and should not be used.

15. Operators should handle headers and dies with care and

should be especially cautious when setting them in place from the top of the machine, because this job usually must be done from an awkward position.

16. After a run has been completed, skids of stock and of forgings should be moved out of the area to allow as much room as possible and to prevent a mix-up, if dies are to be changed.

Setting Up, Removing Dies

17. Before the setup is started, the dies and headers should be checked to make sure they are the correct ones for the job and in good condition, free from defects which could develop into hazards. If the equipment is in good order, setup operations can begin.

18. All power should be shut off, with the main electrical switches in the *off* position and with the master switch and operating pedal locked out. As an extra safeguard, some companies have installed on the main power switch two red lights for each upsetter. These lights are illuminated when the power is on.

19. The water or header lubricant should be turned off. If the

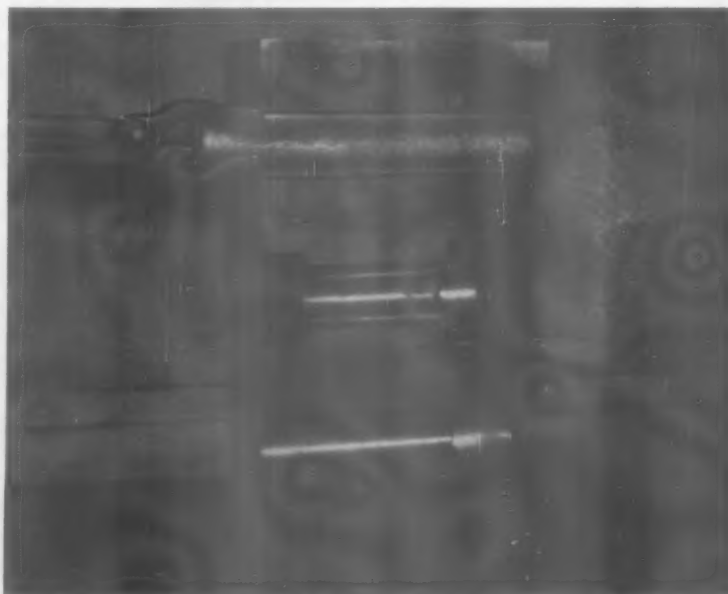


Figure 3. A finger gauge locates this piece of stock in the upset dies. The stock is too short in the header cavity to permit use of a front gauge. Also, the shaft of the stock is too long to be totally enclosed in the dies, yet too short to permit use of a backstop gauge.

SETTING DIES IN UPSETTERS (Horizontal Forging Machines)

1. Before changing or making any adjustment to dies or headers, lock the main power control in "off" position, and wait until flywheel has come to a complete stop.
2. Measure centers and header cavities, and be sure to set headers and dies in proper places.
3. Use inch to try setup.
4. First tryout forging should be unfilled rather than heavy.
5. Cover foot pedal to prevent accidental operation.
6. Maintain machine and all safety features in proper working order. Report defective operation and damaged parts.
7. Keep tools in good condition and use proper size wrenches.
8. Be sure the top of the machine (and the surrounding area) is clean and free of oil and grease or obstructions which could become safety hazards.



SAFETY INSTRUCTION CARD No. 18
National Safety Council
Printed in U.S.A. Stock No 191-86-18

Figure 4. Safety instruction card.

machine is equipped with an air brake to stop the flywheel, this brake should be applied. If not, the die setter must wait until the flywheel stops completely. When it does, the machine is safe—the dies are open and the header slide is back.

20. Using the proper wrenches, the die setter should loosen all setscrews, lock nuts, and hold-down bolts in the clamps which hold stationary and moving dies down. These bolts and clamps need not be removed completely, because the dies can be slid out from underneath them.

21. The next step is to remove both dies from the machine and load them on a pallet for removal. A completely closed eyehook is usually threaded into each die to facilitate removal. The size of this eyehook should be in proportion to the weight of the die, but diameter of the eyehook should be not less than $\frac{3}{4}$ -in.*

*Eyehooks for the moving of machinery and dies should be stocked only in diameters of $\frac{1}{4}$ -in. graduation (such as $\frac{1}{4}$ -in., 1-in., $1\frac{1}{4}$ -in.), never in diameters of $\frac{1}{8}$ -in. graduation ($\frac{1}{8}$ -in., 1-in., $1\frac{1}{8}$ -in.). Some companies have learned through experience that a $\frac{3}{8}$ -in. eyehook may be screwed into a 1-in. hole intentionally or by mistake. Many accidents have occurred when such hooks have pulled out, causing load to drop.

22. Approximately two inches of thread should be sufficient to lift the die out safely. It can be removed efficiently with a swivel or arm crane. After the dies have been removed, all die packing should be taken out and inspected. The die seat should be thoroughly cleaned and inspected for burrs, especially along the die key.

23. The headers and tool dummies should be removed next. If a solid tool holder is used, the complete section can be removed at one time.

24. Individual headers and dummies present a problem, because it is difficult to reach in and loosen the setscrews. If shims have been used in back of the headers, the shims must be removed before new headers are set.

25. The new dies should be carefully measured to determine the amount of packing needed. It is accepted practice to pack all dies with at least a $\frac{1}{8}$ -in. liner to help protect the die seats. Standard die widths and centers should be maintained wherever possible on upset dies.

26. The new stationary die should now be put in place. The setter should make sure the die is properly seated and correctly packed.

27. A pry-bar is commonly used to pry the die into place under the hold-down clamps. A 2-by-4-in. piece of good grade lumber, free from knots and other defects, makes an efficient pry-bar. It should be the correct length.

28. After the die is properly located, the hold-downs may be tightened by hand. At this point the machine is ready to be started.

29. The die setter should open the safety, release the flywheel brake, set the machine on inch, and slowly inch the header slide forward to bring the tool-holders into position for correct assembly of the headers. The power should then be shut off and the switches locked out so the machine is completely inoperative.

30. Assembly of the new headers, tool dummies, or tool-holders can now begin. Since the headers may differ in diameter or shape, the die setter should match the headers to the die cavity to assure they are set on the correct centers.

31. To reduce the possibility of error further, it is good practice to set up according to a die layout which shows all principal dimensions on the particular equipment. The headers can then be set to given dimensions with greater accuracy.

32. If previous repair or rework of the headers resulted in removal of some metal, a suitable number of shims should be added in back of the headers to compensate for such loss. These shims should be of the washer type which fits around the header shank and cannot fall out. Horseshoe-shaped shims should not be used.

33. A complete check should be made to see the assembly is correct before the header and dummy setscrews are finally tightened.

34. The moving die can now be inserted. After it has been properly located and correctly packed, the hold-down bolts can be tightened by hand. (The moving die is set by the same techniques used in setting the stationary die.)

35. After both dies and the headers are in place, the power may be turned on. The machine should be set on inch and inched forward until the dies close. At this time, a check should be made for match alignment and for the proper amount of packing. If too much packing is used, the safety pin should open the dies.

36. Allowance should be made for expansion of the dies when they become hot. It may be necessary to remove a shim from back of a die.

37. If the dies have been correctly set up, all power should again be shut off and locked out and the flywheel allowed to come to a dead stop so the setup can be completed. The die setter should then tighten all die hold-down

bolts and lock nuts or setscrews with the correct wrenches.

38. If a front gauge or a backstop gauge is needed to make successful forgings, the device should be attached to the machine at this time. In setting a front gauge or a backstop, it is standard safe practice to leave the first forging unfilled rather than crowd in too much stock.

39. When the setup has been completed, the power should be turned on for the tryout forging. This tryout piece should be checked dimensionally for final approval before the operator proceeds with production. If the dies or headers need further adjustment, again the power should be shut off, the power switch locked out, and the flywheel brought to a complete stop.

40. Die setters may at times attempt short cuts. For example, they may make a complete setup dimensionally by measuring headers, strokes, and dies without

inching the header slide forward. This practice can prove disastrous, particularly on a worn machine where special shimming is required for proper alignment, and should be prohibited.

Inspection and Maintenance

41. Safe practices are not enough to guarantee accident-free operations. Since worn or defective upsetters can be dangerous to operate, it is imperative these machines be kept in excellent working order. A definite program of inspection and maintenance is essential.

42. A maintenance crew should check all working parts for wear and proper adjustment at least once each week. Since the operator's safety depends to a large extent on proper functioning of the air clutch and the brake, these parts should be inspected daily.

43. The operator should make a daily inspection of air gauges, air lines, water lines, water valves,

belts, pulleys, and tools. He should also be instructed to check daily on performance of the machine and to report abnormal functioning at once.

44. All equipment for handling dies, such as chains, cables, and eyehooks, should be inspected periodically as well as each time used.

45. Upsetters should be properly lubricated daily. If possible, automatic lubricators should be installed.

ACKNOWLEDGMENT

This data sheet was written by William H. Berry, chairman of the Engineering and Technical Publications Subcommittee of the Power Press and Forging Section Executive Committee, National Safety Council. Content has been extensively reviewed by members of the National Safety Council, representatives of chapters of the American Society of Safety Engineers, and representatives of member companies of the Drop Forging Association. This data sheet has been approved for publication by the Publications Committee of the Industrial Conference of the National Safety Council.

Electrical Connections— EIA Conference Theme

THE THIRD EIA conference on reliable electrical connections is scheduled for December 3-5 in Dallas, Tex. This conference will be open to anyone in the electrical manufacturing or electronics field.

The Conference Planning Committee believes electrical connections are as important to the functioning of any electrical part or apparatus as wires, components, and other parts which go into the product or system. In fact, unless every electrical connection is "reliable," nothing designed or made will function in the required manner for the required length of time.

In contrast with former conferences, all types of electrical connections will be considered, including those out-of-sight and within (internal) component parts, such as connections inside capacitors, and those exposed (external) and parts of an electrical or electronic system.

It is planned to devote one full

day to each of three general subjects: Fixed connections (soldered, wrapped, crimped, and welded); sliding and wiping connections (such as encountered in potentiometers, rheostats, switches, and similar devices); and connect-disconnect connections (plugs and jacks).

An attempt will be made to cover all facets of the foregoing subjects, such as choice of materials being joined together, methods and equipment used to join them, materials and processes used to protect connections, effects of usage or environments of the finished parts or systems on electrical connections, and servicing or maintenance.

Government and military authorities will be on hand to discuss military specifications and inspection procedures.

All papers to be presented at the conference will be ready for distribution in printed form six weeks in advance of the conference. Papers will not be read at sessions. Each author will give a brief summary of his paper to

introduce the topic. Then the conference will be thrown open to discussion. Those bashful about getting on their feet may submit written questions.

Each day's session will be a complete entity. Those who cannot stay the full three days will derive maximum benefit from selected topics. There will be no exhibits and no formal lunches or dinners.

The reader is asked to give the conference the benefit of his knowledge, experience and research activities along any of the lines suggested, by case-history reports or a paper. What is sought are proved solutions to actual connection problems, which may range from something as simple as reversing the direction of twist of a stranded wire to a complicated process requiring elaborate equipment.

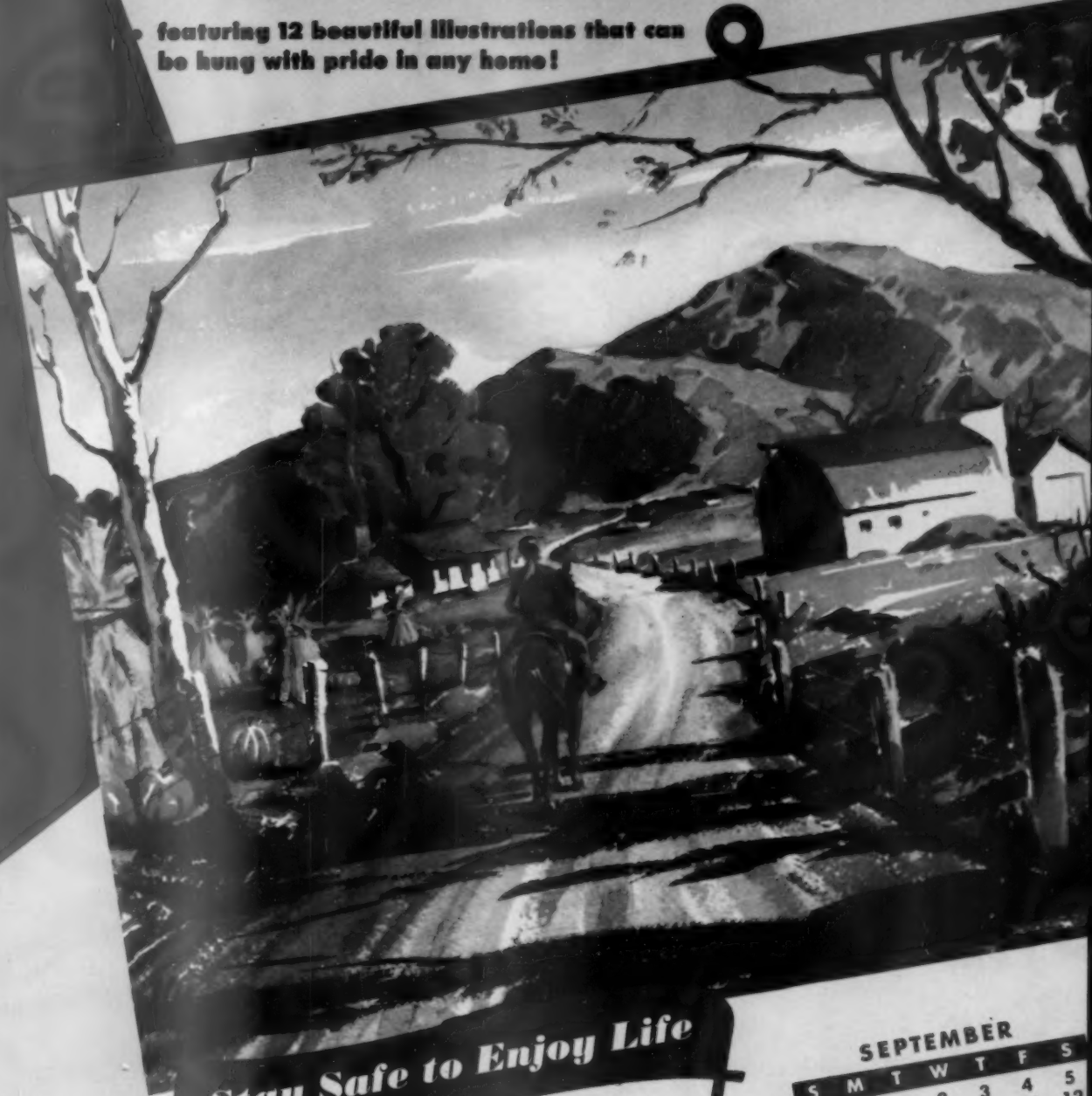
Those who can contribute case histories or an appropriate paper should write to R. George Roesch, general chairman, 1068 South Clinton Street, Syracuse 4, N.Y. Deadline for papers is August 15.

INTRODUCING THE NATIONAL SAFETY CALENDAR FOR 1959

• the safety training tool that works for you in
your employees' homes, every day for a full year!

• featuring the big, monthly, cash-prize contest
that keeps workers and their families thinking about safety!

• featuring 12 beautiful illustrations that can
be hung with pride in any home!



Stay Safe to Enjoy Life

October 1959

SEPTEMBER

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

MON

TUE

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THUR

1

THE NATIONAL SAFETY CALENDAR

keeps 'em

SOLD

on safety

at work



The National Safety Calendar is the one training aid that works for your safety program *every day* during the "off hours" . . . that sits in each employee's family circle and reminds everyone from the breadwinner to the bursting-with-energy kindergartner that safety is a good habit to have! And many of the safety directors who have used the National Safety Calendar in the past have found that workers steeped in this subtle, "off hours" training *are* safer workers, for they've learned to practice safety around the clock.

The calendar for 1959 uses warmly appealing illustrations that depict the pleasures of life, coupled with the reminder, "Stay Safe to Enjoy Life". A truly *artistic* calendar that anyone would be delighted to own, it's also one of the very best of ways to keep workers safety conscious at work, at play, at home . . . fostering safety thoughts by means of the contest, the slogan, and with the brief but pointed references to safety on the job and off, that appear on the back of each page.

The National Safety Calendar is wanted and welcomed by employees and their families . . .

it's given to more employees by more firms than any of the other 4000 items produced by the Council!

**here's proof that the National Safety Calendar
is a wanted, used and effective Training aid!**

a veritable mountain of mail . . . an average of 30,000 letters and cards . . . received in a *single month* from families owning National Safety Calendars, attests to the fact that they *want* the calendar—that they regard it as a practical, useful gift . . . that the big, cash-prize contest excites their interest and enthusiasm — that the National Safety Calendar *makes them think more about safety!*

Here are actual excerpts from letters received!



"I have had more downright enjoyment (as well as unrecognized 'accident-traps' called to my attention) as a result of these contests than in anything I've done in many years."



"Thinking up rhymes to your safety contests sort of saturates one in safety. At the same time, it's a fascinating way to spend spare time."

"I find myself cautioning others about things I would not have thought of as hazardous except for the safety calendar."

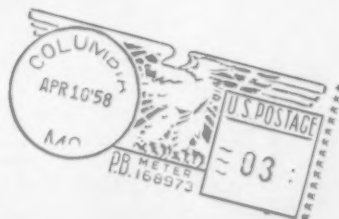


"Your safety calendar has helped me accomplish the impossible! My husband no longer smokes in bed."



"When I turn a new calendar page, I thoroughly steep myself in the picture disclosed on its back. As I go about my work, safety slogans for the month run merrily through my head and get produced for family inspection."

"These contests are fun, and stimulating and my whole family is more safety minded as a result."

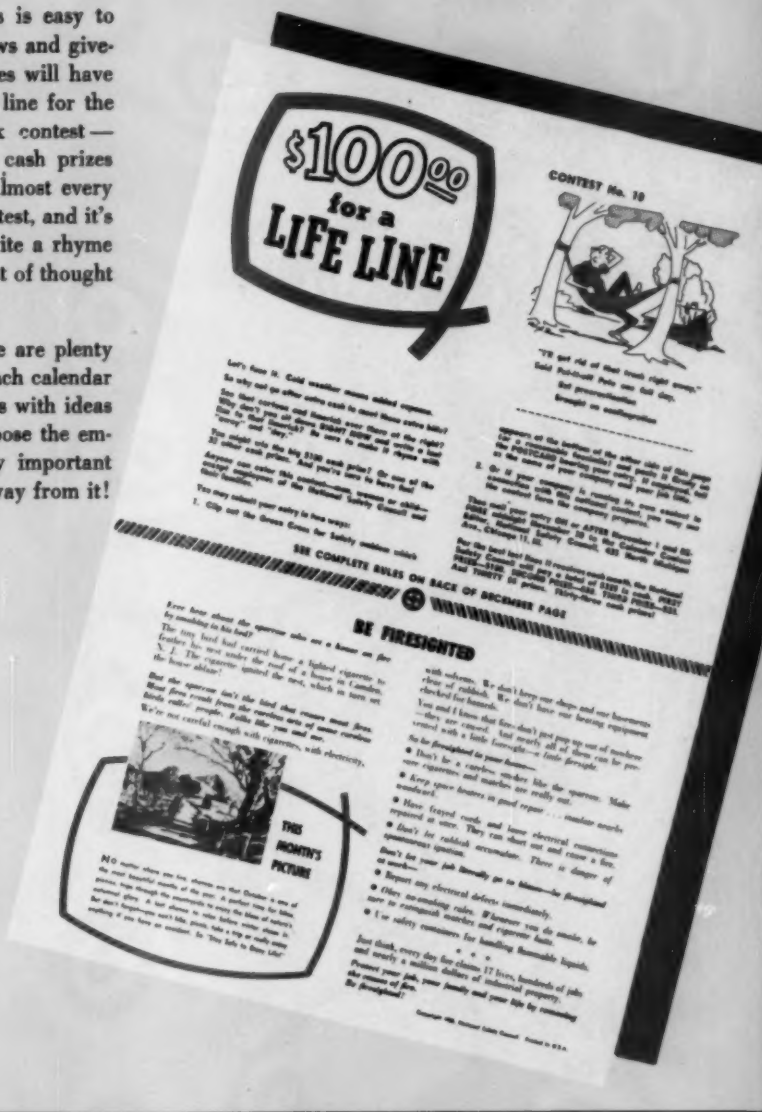


and here's a big reason why the National Safety Calendar is so popular

Only the National Safety Calendar
offers the monthly cash prize contest
that gets employees and their families
to put more thought toward accident prevention

Everyone loves puzzles and quizzes, as is easy to see by the popularity of T.V. panel shows and giveaways. And employees and their families will have lots of fun thinking up a rhyming last line for the monthly SAVE-A-LIFE LINE limerick contest—with the chance to win one of the 33 cash prizes that total up to \$325.00 each month. Almost every calendar owner tries his hand at the contest, and it's pretty obvious that anyone trying to write a rhyme about *safety* is going to have to give a lot of thought to accident prevention!

As you can see in the illustration, there are plenty of safety tips provided on the back of each calendar page. These not only provide the readers with ideas for their limerick entry—they also expose the employee and his family to some mighty important advice on staying safe on the job and away from it!



PRICE SCHEDULE (F.O.B. Chicago in Quantities of 10 or More) Prices Subject to 10% Discount to National Safety Council Members

Quantity	Packed Flat In Bulk (091.19-1)	In Mailing Tubes (091.29-1)
1 to 9	.70 each (postpaid)	.75 each (postpaid)
10 to 199	.60 each	.64 each
200 to 999	.50 each	.535 each
1,000 to 9,999	.455 each	.49 each
10,000 to 19,999	.41 each	.449 each
20,000 or more	.38 each	.415 each

NOTE:—Orders for 200 or more Calendars imprinted without extra charge. Imprinting charge on orders for less than 200.....\$7.00.

12 beautiful, appealing illustrations . . .

Here is the entire series of calendar illustrations for 1959. On the actual calendar each illustration appears in the same rich glowing colors used by the artists, and as you can see, each scene pictures an aspect of enjoying life . . . enjoying a hike under crisp, autumn skies; the exhilaration of wintertime ice-skating; the joy of a walk in the park, between leafy, green trees . . . things which make life *fun*! And with each scene appear the words "Stay Safe to Enjoy Life" . . . a simple yet thought provoking reminder of one of the basic reasons for accident prevention.

This is not only the most artistic calendar ever produced by the Council, it is also one of the most effective!

*printed in
full color!*



JANUARY



FEBRUARY



MARCH



APRIL



MAY



JUNE



JULY



AUGUST



SEPTEMBER



OCTOBER



NOVEMBER



DECEMBER

Free promotional tie-in kits

With an order for 100 or more National Safety Calendars you are entitled to a complete Calendar Contest Promotion Kit. This kit holds everything you'll need to whip-up excitement in the Calendar Contest—posters, streamers, bulletins, letter outlines, a booklet filled with promotion ideas, cartoons for reproduction in your house organ. This entire kit will be sent to you free, with an order for 100 or more calendars, upon request. Additional kits will be provided for each 200 calendars purchased over the first 100.



NATIONAL SAFETY COUNCIL

425 N. Michigan Ave., Chicago 11, Ill.

70M45840 PRINTED IN U.S.A. MS141

Help for Aging Eyes

Tri-focals will often prevent the inconvenience and hazard of blurred vision in the middle range

By DR. MILTON ROSS

VISION in the middle range has been a neglected phase of eye care. This middle range is the distance of approximately two to three feet from the individual who wears bifocals. Since today's population of bifocal wearers is increasing, this area of vision is of prime importance.

To make the blurred intermediate area safe, many bifocal users, i.e., presbyopes, should be wearing trifocals. These lenses are safer than most bifocals for stair climbing and efficiency of vision in the middle range.

Thus, vision past 18 inches becomes clear and continuous. Borish¹ reports that 50 per cent of trifocal subjects found it was as easy to adapt to as bifocals; 36 per cent claimed it was easier than learning how to use a bifocal; and 14 per cent found trifocals more difficult.

The trifocal lens is usually about one-quarter inch in height and adjacent to the top of the bifocal segment, although the position and power of a middle-range segment may be varied according to the particular visual requirements of an individual.

The basis for an understanding of the intermediate range, and its ramifications, is impossible without the following optical concept. Ross² states that, as the lens is made weaker, the distance or work range increases from the eye for the object of regard, and the visual acuity decreases.

Conversely, as the lens is made stronger, the visual acuity is increased as the range or distance is reduced. When the lens curvature of the human eye becomes weaker, an optical lens must re-

place the defect so the eye may see.

In effect, one may compare this intermediate vision, when uncorrected, to the unsafe driver who sees the blurred warning sign too late to prevent the accident. The closer the subject is to the focal point of an accident, the greater is the resulting damage to the person.

It is not unreasonable to predict that an accident may be avoided by a trifocal wearer who can get out of the way in time because he sees the danger sooner.

Misjudgments of distances are due, in part, to poor visual orientation in the middle range. Marks³ reports the field of vision is increased with trifocals. As appreciation of depth and stereopsis of vision is enhanced by a good field and absence of blur, these misjudgments in perspective are avoided.

It should be noted that the trifocal is usually not appreciated by persons who cannot obtain normal vision with lenses. However, Taylor⁴ claims that only when trifocals are worn is their usefulness appreciated by all normal-seeing persons.

Three Case Histories

The following case histories will illustrate the use and benefits derived from trifocals. These cases are typical, although most of the technical data, which would be of no interest to the reader, has been omitted. At this office, when lenses are dispensed, patients are routinely requested to return after three weeks for a report on their progress.

Case History No. 1: W. G., age 55, auto mechanic. This patient complained of difficulty at the

reading level and, in addition, the vision range past the finger tips. He requested a lens to permit him to see properly in the middle range.

Diagnosis—Since examination revealed the patient could see with his distance lenses beyond 26 inches, and his reading lenses were limited to 16 inches, this man was extremely blurred, namely, the 10 inches from 16 to 26 inches, which was the area in which he had to work.

Intermediate lenses were incorporated to complete this worker's general-purpose glasses in the form of a multi-focal lens. Auxiliary glasses, in this instance, were contra-indicated. The progress report was satisfactory. Natural and continuous vision was experienced at all distances. W. G. did his job in less time and with less fatigue.

Case History No. 2: J. W. W., iron worker and welder, age 57. This patient complained of difficulty in reading. He further reported difficulty in working at distances further than his old bifocals would permit, especially on welding and studying large blueprints.

Mr. W. confided he never really knew how fast he was traveling to and from work since looking at his blurry dashboard was unsatisfactory either with the bifocal or the distance portion of his lenses. An office demonstration of the clarity of vision obtainable between two and three feet, using an intermediate lens, received enthusiastic interest.

Prognosis—A multifocal lens should negate all difficulties in the middle range. A weld bar, suitable for intermediate range, was recommended for use in the worker's welding hood. He was to use this in conjunction with the distance part of his spectacles.

—To page 115

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2. Milton Ross, "Eye Safety is Job Safety—Check Yours," *Welding Engineer*, October 1957.
3. R. Marks, "Factors for Consideration in the Design and Construction of Single Vision and Multifocal Lenses," Shuron Optical Co., Rochester, N. Y.
4. G. L. Taylor, "Research"—Publication 22.

DR. MILTON ROSS, is an optometrist in Calumet City, Ill.

Can you tell a killer

Read the true story in these aluminum bars of how well safety hats protect you from lethal overhead blows. These actual plates were used in recent laboratory *field type* tests of all safety hats available. Can you recognize the marks of killing blows?

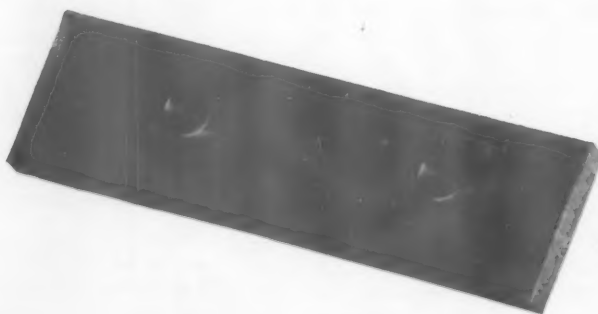
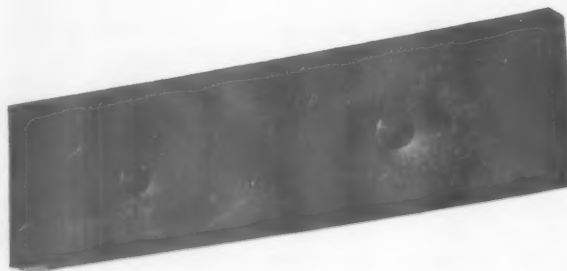
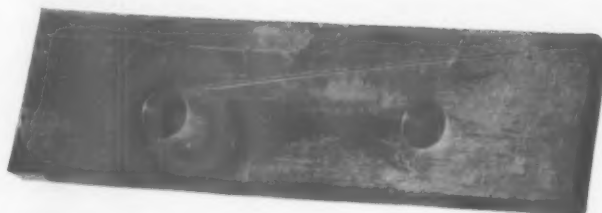
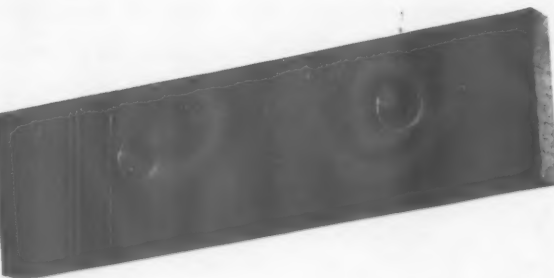
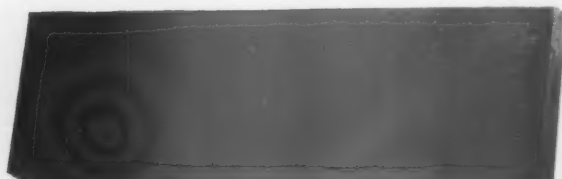
The deeper the depression . . . the lower the safety margin. See how Bullard outperforms all others . . . in fact, gives you 33% better protection . . . when compared in *field type* tests!

ONLY ONE TRUE MEASURE OF SAFETY HAT PERFORMANCE—"FIELD TYPE TESTS"

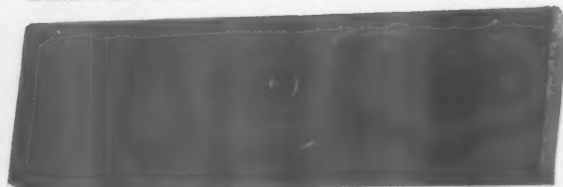
For years manufacturers have been content to test hats under the artificial laboratory conditions. Bullard engineers conducting these tests have gone one step further. They have removed the one condition in the standard specifications that makes conventional test results exaggerated and unrealistic!



Bullard fiber glass

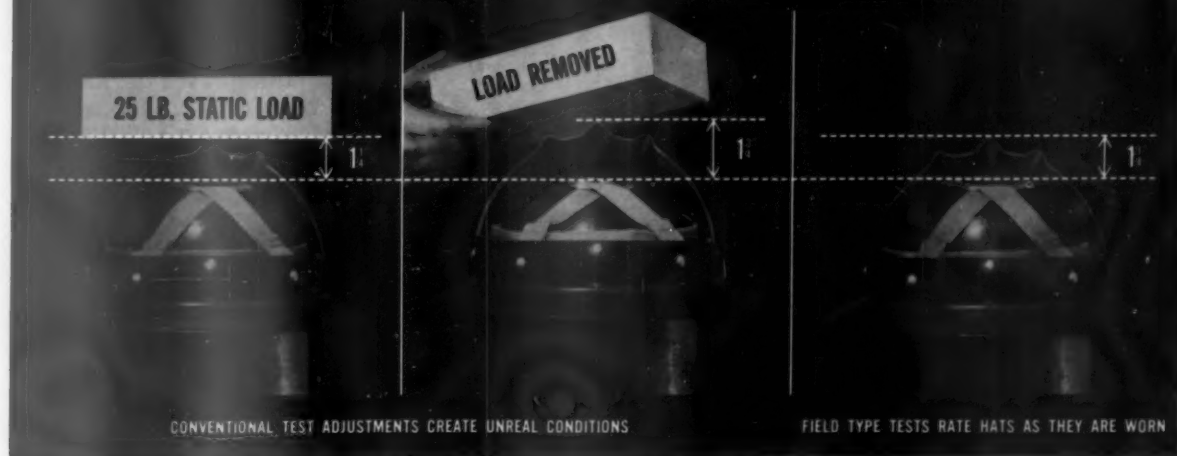


Bullard aluminum



by his tracks?

Here's the difference that makes "field type" tests a truer measure of hat performance



Standard specifications for adjusting crown clearance—distance between top of inside shell and top of test block—make current testing methods unrealistic. Crown clearance measurement in these tests is made with a 25 lb. static load on top of the hat. Of course, when the static load is removed, the shell of

the hat pops up, giving crown clearance of as much as $1\frac{3}{4}$ ". You know that men in the field do not wear hats this high . . . they are uncomfortable and may be blown or knocked off too easily . . . they wear them low—close to their heads.

In the tests reported field conditions are more closely approximated. Hats have been adjusted to a $1\frac{1}{4}$ " crown clearance without the use of a static load. When the advantage of this extra crown clearance is taken away, see what a different picture you get of safety hat performance . . .



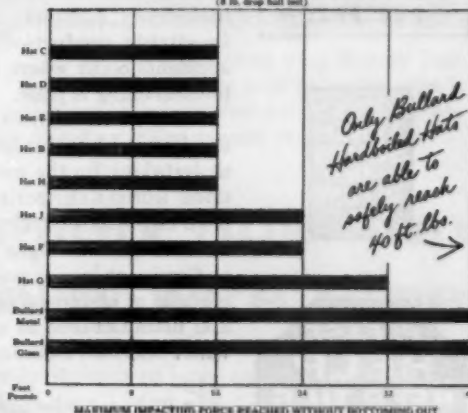
E. D. BULLARD COMPANY

Sausalito, California

WRITE FOR SUMMARIZED TEST REPORTS #B1-R6



HELMET COMPARATIVE IMPACT PERFORMANCE DATA
FIELD TYPE TESTS
(8 ft. drop ball test)



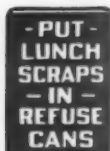
Bullard Safety Hats and Caps are available in fiber glass or aluminum in a wide choice of colors.



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Circle Item No. 9—Reader Service Card

Other Suggestions for Muffling Jet Noise

Solutions to the problem of jet engine noise, in order to enable commercial airlines to use jet planes in metropolitan centers, were proposed at the annual meeting of The American Society of Mechanical Engineers in New York. The speaker, L. R. Hackney, chief engineer for research and development of the Air Logistics Corp., Pasadena, Calif., proposed a combination of noise suppressors and substitution of towing for taxiing while on the ground.

Other speakers at the same meeting discussed aspects of aircraft acoustics and problems that are being created by excessive noise near airports.

Many models of the newest jet planes have been refused permission to land at airports near cities, including New York, because of the disturbance caused by their engines.

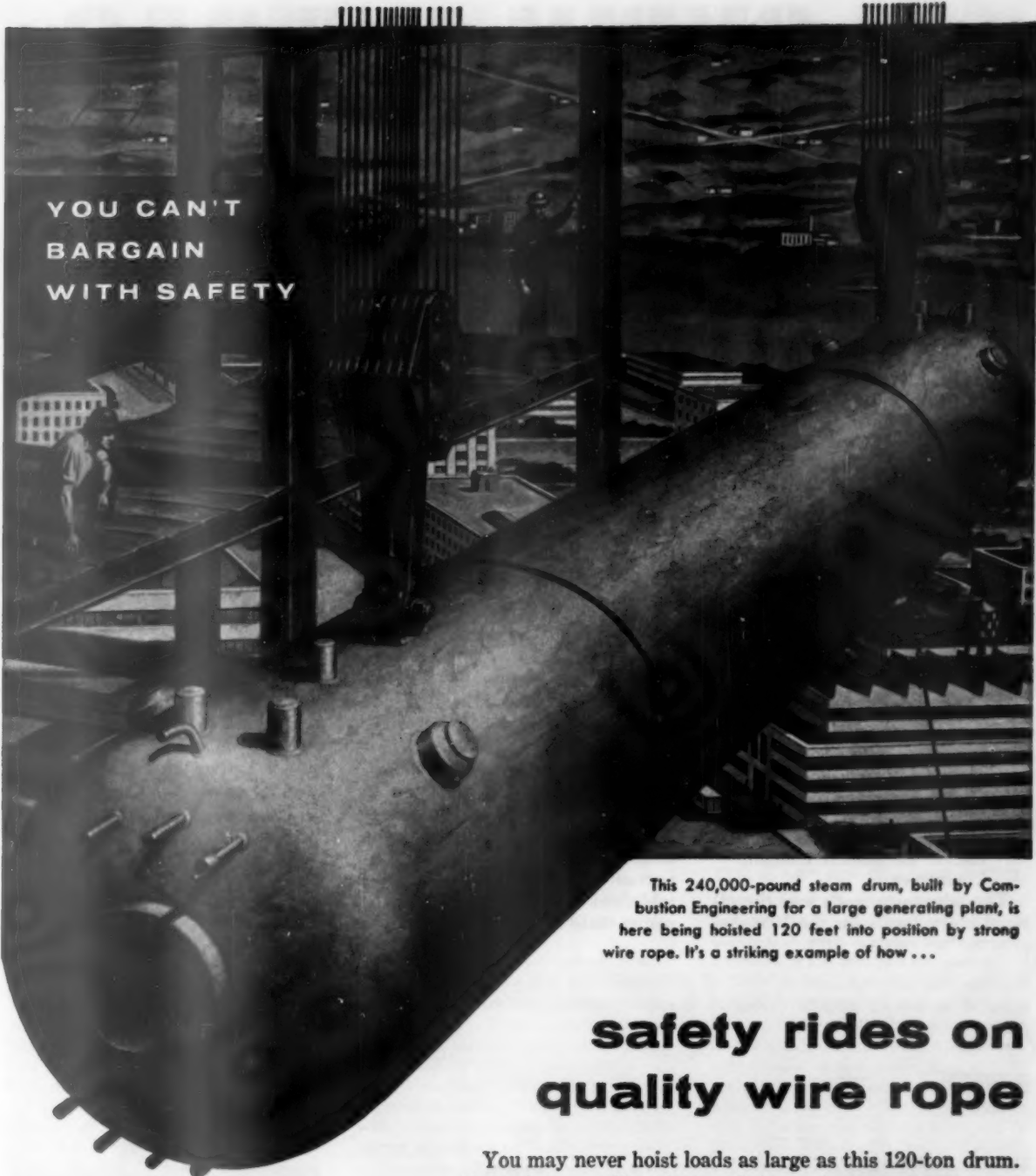
In his paper, Mr. Hackney said that in a typical airport situation planes would be landing or taking off for only 15 minutes out of each hour, but that noise of planes on the ground would be continuous. He proposed, therefore, that first attention be given to ground noise.

By using tractor-like vehicles, he said, it would be possible to virtually eliminate taxiing, thereby cutting not only noise but fuel consumption, danger of heat blast and expense. He pointed out that the cost of taxiing for a single airplane during a year's operations, might well come to \$120,000 for fuel and engine wear.

Mr. Hackney also called for the use of mobile noise suppressors, or mufflers, that could quickly be attached to any jet engine that had to be operated on the ground during testing or maintenance.

These steps, plus installation of airborne suppressors to cut noise during take-off and landing, would drastically reduce noise near airports, he concluded.

Vocational adviser to youth: "Your aptitude test shows your best opportunities lie in a field where your father holds an influential position."



**YOU CAN'T
BARGAIN
WITH SAFETY**

This 240,000-pound steam drum, built by Combustion Engineering for a large generating plant, is here being hoisted 120 feet into position by strong wire rope. It's a striking example of how...

safety rides on quality wire rope

You may never hoist loads as large as this 120-ton drum. But *safe, top quality wire rope is just as important to your own operations.* For, although the price of a "bargain" rope would be less, failure of such a rope could cost you thousands of dollars in wrecked equipment. Don't be a victim of false economy. Buy a wire rope that's a quality rope—buy Wickwire Rope.

5339



**LOOK FOR THE
YELLOW TRIANGLE**

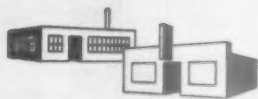


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Circle Item No. 10—Reader Service Card

SMALL BUSINESS and ASSOCIATIONS



By A. M. Baltzer and John T. Curry

Small Business Program Staff, National Safety Council

Association Award Judges Announced

Chairman Clyde Schlueter, of the Council's Small Business and Associations Committee, reports that the Committee of Judges for the 1958 Association Awards, is now complete. The Council is fortunate in that, again, the same nationally known organizations are represented. The judges are:

Glenn B. Sanberg, chairman, American Society of Association Executives

John M. Convery, National Association of Manufacturers
Chas. M. Mortensen, Chamber of Commerce of the United States

Robert Hagopian, Association of Casualty and Surety Companies

Jay Judkins, U. S. Department of Commerce

Hal T. Lovejoy, Jamestown Mutual Insurance Company, representing National Association of Mutual Casualty Companies

The announcements and the official entry forms for the 1958 As-

sociation Awards were mailed May 1 to approximately 200 association members of the Council. The deadline for entries is July 1, and it is expected that the judges will meet in Washington the early part of August, to determine the winners.

If you are interested in the participation of any particular association, just write to Small Business Program, NSC, for complete information on the award rules.

17 Per Cent up in Smoke!

In a talk at the Fourth Annual Convention of the *Northeastern Loggers Association* in Elmira, N.Y., April 22, the writer told 150 loggers in the safety session that, figuratively, 17 per cent of their payroll is "going up in smoke." Loggers are vitally interested in fire prevention, as their fire losses are all too well known, but some have overlooked the equally important accident losses which established a Workmen's Compensation Rate of about \$17 per \$100

payroll in the State of New York.

Briefly, our story was this:

- Logging has the highest injury rates, nationally, in New York and in other states.
- The indirect plus the direct costs are enormous, but so are potential savings if this association follows the successful pattern of other associations.
- The small amount of time and modest budget for accident prevention is well worth while; organizations such as the Council, other associations and insurance companies, can help cut injuries and losses.

Is *your* industry making sufficient progress? Are the smaller firms doing as well as those with safety engineers? Better check into it and get your associations into the safety picture.

which man is more likely to cause an accident?

SAFETY *begins, grows, improves and succeeds*
BETWEEN THE EARS!

WHAT'S GOING ON
...under his hat?



THIS ATTRACTIVE and clever program for another of the Western Oil and Gas Association's two-day safety conferences lists a total of 39 safety and fire talks—which does a lot to explain the Association's success in winning our Association Safety Award. The hard hat on the cover is cut out and hinged to disclose the photo of the man's head "tagged" with attitudes which mean the difference between safety and injury.

SAFETY NEWS

from the laboratories of

CHEMICAL CLEANING COMPOUNDS

- Safer Solvent Cleaning
- Antiseptic Handwashing
- Clean, Non-Slip Concrete Floors



SAFER SOLVENT CLEANING

With the general trend away from the use of carbon tetrachloride as an industrial cleaning agent, much has been written in recent months about the so-called "safety solvents."

The proper selection of a safety solvent for cleaning electrical equipment must not only be based upon the obvious considerations of cleaning ability, cost, speed and attack on insulation, but it must, in safety-conscious plants, of necessity be based also on such important factors as toxicity, flash point and odor.

A good safety solvent should be a balanced blend, exhibiting the desired features of a straight petroleum-type solvent (with very little attack on insulating varnish and with very low toxicity) combined with the advantages of a chlorinated solvent (good solvency and extremely high flash point).

Turco-Solv is a material of this type, resulting from its balanced formulation. Its initial flash point (TCC) is in excess of 200°F. Although it is a mixture of solvents, its composition remains fairly constant through the complete evaporation cycle. The flash point during evaporation to complete dryness never falls below 125°F. (COC).

Moreover, Turco-Solv has been carefully

compounded without the inclusion of any of the more toxic chlorinated hydrocarbons, such as carbon tetrachloride, ethylene dichloride or tetrachloroethane. Simply stated, toxicological considerations were not abandoned merely for the sake of obtaining maximum cleaning power.

Turco-Solv boasts an optimum evaporation rate. A "middle of the road" material, Turco-Solv evaporates to complete dryness in five minutes, under normal field conditions. This is halfway between the slow-drying materials of the Stoddard Solvent type and the extremely volatile materials of the carbon tetrachloride or inhibited methyl chloroform types. Slow drying often leads to the possibility of evaporation residues, or dangerous electrical flashovers, when motors are started prematurely after cleaning. An excessively fast evaporation rate, on the other hand, leads to intensified fuming and a drastic rise in concentration of air contamination.

ANTISEPTIC HANDWASHING

Concerns whose personnel are subjected to absenteeism due to superficial skin infections caused by many common skin bacteria and some pathogenic fungi are looking with interest at the bacteriostatic soaps offered by cosmetic firms to the public today.

Turco Handisan, now antiseptic with Actamer (Monsanto's Reg. T.M.—Bithionol), offers industry a bacteriostatic industrial hand soap. Repeated daily usage of this product reduces resident skin bacteria by as much as 97%. (The available evidence shows that the full reduction of the bacterial population of the skin achievable with bithionol soaps requires regular daily use for at least one week.)

The resident bacterial population of the skin includes many deeply imbedded gram-positive organisms, not readily removable with soap and water, which are responsible for superficial skin infections and which may be contributory to secondary infections resulting from cuts and scrapes. Turco



Handisan with Actamer, by inhibiting the growth of offending organisms reduces the effects of their activity. By remaining in contact with the organisms and the skin long after applications, Handisan with Actamer provides continuing protection from the multiplication of residual bacteria.

Samples of this product are available without cost to safety engineers who request them on their company letterheads.

CLEAN, NON-SLIP CONCRETE FLOORS

Dirty concrete floors are not only dark and unsightly—they are dangerous as well. Grease is slippery. A greasy floor increases accidents. It also creates a fire hazard.

For many years, industrial concerns used flammable solvents to clean concrete floors. Now, with Turco Aktiv, this hazardous procedure is no longer necessary. Aktiv is a mild, yet potent, non-caustic alkaline powder, ideal for use on any floor that can be mopped with water. After mixing Aktiv with hot water, the solution is applied to the surface of the floor and worked in with a brush. A dwell time of several minutes allows the solution to penetrate grease, breaking the bond that holds the grease to the concrete. A pressure water rinse removes the grease, suspended in the Aktiv solution and leaves floors clean, bright—and safe!

Handisan and Aktiv are registered trade marks.



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Circle Item No. 11—Reader Service Card



THE SHOCK THAT KILLS

By N. GILLMOR LONG, M.D.

Knowing these facts about electrical injuries will help in treating the victims

THE BOOM of a crane suddenly gets entangled with overhead high-voltage power lines. There is a flash of light and before the operator can shout a warning a laborer who had been leaning against the crane tread is electrocuted. The operator emerges safely after the boom has swung free or after the power is cut off.

A housewife is electrocuted while using a defective low-voltage hair dryer.

In England, a guitar player is electrocuted while strumming his electrical instrument at a concert.

The list grows, with public apathy penetrated in an occasional tragic case such as the death of a boy in an accident centered about a TV set. In this age of electric razors, typewriters, appliances, and home workshop tools, it must be emphasized repeatedly that severe or fatal burns and shocks can stem from relatively high-amperage and low-voltage as well as from high-voltage sources.

Unfortunately, the pungent, distinct, never-to-be-forgotten odor of burning human flesh was not extinguished with the destruction of Dachau and Buchenwald. It is a daily universal occurrence due to the careless handling of electricity. By the same token, electrocutions are not always official payment of debts to society, but many times the innocent paying the price in the hands of a careless executioner—a fellow worker.

DOCTOR N. GILLMOR LONG is Chief Surgeon, Lumbermens Mutual Casualty Company of Illinois, Chicago.

Organizations such as the Bureau of Safety, Edison Electric Institute, National Association of Mutual Casualty Companies, and National Safety Council are constantly on the alert to improve safeguards against mechanical defects in manufacture and application and are conducting a never-ceasing public education program to insure the safe use of electricity.

Electrical burns usually are the more serious type of burns treated in medical and industrial practice. The odor from such a burn is most offensive—cooked human flesh. A severe burn is a wound, with sudden blood and blood plasma loss and resulting hypovolemic shock (increasing blood viscosity), causing what is termed "burn shock."

Shock Is Different

This is somewhat different from electrical shock in that the effect on the heart is more gradual. A smaller volume of blood returns to the heart, lessening heart output and lowering the blood pressure. A moderately to severely burned patient should always be forced to lie down, with his head level with or lower than his body. He will quickly go into a condition of shock and, if standing, might have a large surface area burn complicated by a fractured skull or back, caused by falling. I have seen patients chatting away gaily in apparent good condition go into profound shock in the flash of a second.

Severe burn cases have, in

addition, increased shock potential by the release of toxin from a clostridial form of bacteria always present in large amounts in the gastrointestinal tract and activated by such a burn. This is why all major burn cases routinely receive tetanus antitoxin or tetanus toxoid. To prevent shock, as well as to reduce pain, sedation is given immediately along with oxygen (if indicated), avoidance of external heat, antibiotics, etc.

Most electrical burns are deep—at the local burned area there is loss of whole thickness of skin. The typical electrical burn has a cooked appearance and is very painful, calling for immediate treatment and early skin graft to cut down the period of treatment as well as to afford relief to the patient.

The path of the current usually can be traced by a burn pattern with various parts of the body being more susceptible. The flash type of burn usually is not as serious a problem. Small electrical burns are readily treated before medical attention by the usual first-aid measures of vaseline gauze and pressure dressings.

Omitted from this discussion are the effects on the kidneys, liver, adrenals, and resulting peptic ulcers secondary to severe burns.

Electrical shock. We have all had the tingling sensation produced by sticking our finger into an empty light socket or the unpleasant jump while attempting a do-it-yourself project on the

—To page 116



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**Books, pamphlets and periodicals of interest
to safety men**

Compiled by Ruth Parks, Librarian, NSC

Fire-Fighting Respiratory Hazards

Respiratory Hazards of the Fire Service, by William D. Claudy, A. B., M.D. National Fire Protection Association, Boston, Mass. 1957, 134 pages, \$4.25.

THIS BOOK provides within a single cover a general reference for all respiratory problems encountered in fire fighting. Any person responsible for the treatment of fire casualties will find here concise, authoritative information about toxic agents and methods of combating their ill effects. The book contains 15 chapters and a bibliography, but no index.

This publication would be of value as a reference to those responsible for the protection of fire fighting crews as well as the members of the crews. For the most part, the types of equipment discussed and toxic hazards encountered would be applicable to relatively large fires.

The book discusses in detail four types of respiratory equipment for fire fighters: universal filter or canister mask; the self-contained demand mask; oxygen-generating (rebreathing) self-contained mask—the "Chemox" and self-contained oxygen-rebreathing apparatus (lung-governed). The discussion includes how this equipment operates, how to place it in service, care and maintenance, inspections, and general precautions.

Other chapters comment on methods of artificial respiration, maintenance and cylinder recharging, measuring amounts of oxygen in air, carbon monoxide in air, and presence of carbon monoxide in blood. Several chapters offer information on the common hazards of toxic gases, such as carbon monoxide, carbon dioxide, hydrogen sulfide, ammonia, sulphur dioxide and hydrogen cyanide. Also discussed are re-

lated factors, including the effective heat, steam and water, and anoxia affecting performance. Symptoms and treatment of toxic gases, such as those generated by tetrachloride in the presence of heat, encountered as a result of fire fighting and extinguishment are well covered.

The book does not simplify scientific and medical terminology to make it "more available" for laymen. The terminology is precise and conveys a particular meaning. Many terms are self-explanatory; any good standard dictionary will yield information on the remainder.

This publication is Dr. Claudy's. It has not been acted on or reviewed by any technical committees of the NFPA. It would be particularly useful to municipal fire departments and those organizations having their own fire fighting crews who would be exposed to respiratory hazards in fighting fires.

ROBERT CURRIE

Supervision

Leadership on the Job; Guides to Good Supervision. Edited by the staff of *Supervisory Management*. American Management Association, 1515 Broadway, New York 36. 1957; 303 p. \$4 to members, \$6 to non-members.

THIS IS a collection of short articles on nearly every aspect of supervision. The authors are personnel specialists, business executives, public relations people, and educators. The articles have appeared in AMA's magazine, *Supervisory Management*.

Taken individually, they make quick, easy reading. A training man or somebody who makes occasional talks to supervisory groups may find some helpful ideas on expressing his thoughts.

This book is probably not of value as a text but could be interesting and useful if made available to supervisors for occasional reading.

GLENN F. GRIFFIN

BOOKS AND PAMPHLETS

Construction

Occupancy Fire Record—Buildings Under Construction. National Fire Protection Association, 60 Battery March St., Boston 10. 1958. 16pp. Fire Record Bulletin FR58-1, 50c.

Fire Protection

Building Loss Possibilities from Fire and Natural Hazards. National Board of Fire Underwriters, 85 John St., New York 38. 1958. 22pp.

MAGAZINE ARTICLES

Dermatitis

"Dermatitis in Industry." Daniel C. Braun and Rosedith Sitgreavis. *A.M.A. Archives of Industrial Health*. April 1958. pp259-272.

"Vioform-Hydrocortisone Cream in Selected Dermatoses with Emphasis on Industrial Cases." Bart M. James and John A. Hunt. *Industrial Medicine and Surgery*. April 1958. pp199-201.

Electrical Industry

"Hot-Line Maintenance Work on Swedish Transmission Lines." O. D. Zetterholm and Lars G. Bergman. *Electric Light and Power* (Annual Foreign Practices Issue), March 25, 1958. pp87-92.

Fire Protection

"New Type Crash Unit Controls Bulk Plant Blaze." *Fire Engineering*, March, 1958. pp200-201.

Floors

"How to Keep Conductive Floors Conductive." P. J. Sereda. *Hospitals*. April 1, 1958. pp71-73.

Fuels

"Toxicity of High-Energy Fuels Poses Hazards for Handlers." William H. Schecter. *Missiles and Rockets*. April 1958. pp85-86.

Handling Material

"Conveyor Belting in Canada." C. M. Metcalfe and G. A. R. Prentice. *Canadian Mining Journal*. March 1958. pp65-70.

Health

"Early Metabolic Changes Following Cobalt Exposure." Herbert E. Stokinger and William D. Wagner. *A.M.A. Archives of Industrial Health*. April 1958. pp273-279.

"Medical Department Layout and Design Section III—Reconstruction of the Proposed Plan"—Continued. William J. Fulton. *Industrial Medicine and Surgery*. April 1958. pp179-198.

"Scope, Objectives, and Functions of Occupational Health Programs." *Industrial Medicine and Surgery*. April 1958. pp209-211.

"The Toxic Properties of Some



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Position

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Scott Demand Respirators provide gentle refreshing air on inhalation only. There is no wasteful, uncomfortable, constant flow to irritate eyes and nasal passages. Wearers say "As comfortable for 8 hours as for 8 minutes."

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Fixed Air supply installation, using high pressure air cylinder. Illustration shows Scottoramic Full-Face Mask.



Fixed Air supply installation using plant air supply. Illustrated with Half Mask, for use where face and eye protection are not required.



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Export: Southern Oxygen Co., 250 West 57th Street, New York 19, N. Y.

Circle Item No. 14—Reader Service Card

Timber Woods." Carey P. McCord. *Industrial Medicine and Surgery*. April 1958. pp202-204.

"Training in Occupational Medicine." *Industrial Medicine and Surgery*. April 1958. pp205-208.

Hospitals

"Safety." Helen Willems, *Hospital*. April 16, 1958. pp98-100.

Hotels

"How to Organize a Hotel Safety Program." Robert C. Petrie. *The Hotel Monthly*. April 1958. pp40-42.

Logging

"Company Gains Safety and Efficiency in Winterized Logging." *The Timberman*. April 1958. pp38-39.

Maintenance

"Window Washing." *Modern Sanitation and Building Maintenance*. March 1958. pp22-25.

Nurses

"The Industrial Nurse Teaches Health." Mary G. Deegan. *The American Journal of Nursing*. April 1958. pp537-540.

Pulp and Paper Industry

"Chemical Hazards of Pulp Bleaching." *Pulp and Paper Magazine of Canada*. C. L. Peterson. March 1958. pp218.

ADDRESSES OF MAGAZINES MENTIONED

Readers are asked to send their requests for copies of magazine articles to the publishers, rather than to the NSC Library, which is unable to fill such orders.

A. M. A. Archives of Industrial Health, American Medical Association, 535 N. Dearborn St., Chicago.

American Journal of Nursing, 2 Park Ave., New York 16.

Canadian Mining Journal, National Business Publications, Gardenvale, Que., Canada.

Electric Light and Power, Haywood Publishing Co., 6 N. Michigan Ave., Chicago 6.

Fire Engineering, Case-Sheppard-Mann Dept., 305 E. 45th St., New York 17.

Hospitals, American Hospital Association, 18 E. Division St., Chicago 10.

The Hotel Monthly, 1948 Ridge Ave., Evanston, Ill.

Industrial Medicine and Surgery, 605 N. Michigan Ave., Chicago 11.

Missiles and Rockets, American Aviation Publications, 1001 Vermont Ave., N. W., Washington 5, D. C.

Modern Sanitation and Building Maintenance, Powell Magazines, Inc., Easton, Pa.

Pulp and Paper Magazine of Canada, National Business Publication, Gardenvale, Que., Canada.

The Timberman, Miller Freeman Publications, 731 S. W. Oak St., Portland 5, Ore.

NEVER OVERLOOK THE DANGER OF EXPLOSIVE DUST...

Some of the most disastrous explosions in industrial history occurred through the ignition of dust suspended in plant atmosphere—some of them dusts which were thought to be perfectly harmless. *Until they exploded.*

The moral is clear: If you can see quantities of dust in your plant, it's dangerous.

Crouse-Hinds dust-tight* Condulet equipment seals off electrical sparks and prevents ignition of air-suspended dusts. It is designed to minimize the accumulation of dust on outer surfaces. As an added precaution, it is built to operate at a temperature below dust-ignition points even when blanketed with dust.

The new Crouse-Hinds "Hazard Finder" will help locate the hidden probabilities of electrically-ignited explosions in your plant. It reflects, in non-technical language, the latest findings of the National Fire Prevention Association for thorough control of electrical explosion hazards. Just clip coupon below.

**Dust-ignition-proof.*



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Circle Item No. 15—Reader Service Card

AROUND THE COMPASS



ACTIVITIES • PROGRAMS • EVENTS

By Nils Lofgren

Field Service Department, NSC

Appraisals Scheduled

Eighty-four state and local safety organizations have requested the Inventory and Appraisal Service adopted by the Conference of State and Local Safety Organizations last October. Field work has been completed on 10 of these organizations. The remaining 74 have been scheduled for completion by July 15.

This schedule will make it possible for the Executive Committee to evaluate organizations and programs early enough so the list of organizations recommended for accreditation will be prepared prior to the Congress in October.

Syracuse 40th Birthday

Syracuse (New York) Safety Council, fifth oldest in the nation, celebrated its 40th anniversary at a dinner meeting March 25.

Preliminary steps in organizing this council were taken on February 2, 1918, at a meeting of the Chamber of Commerce. Following several further organizational meetings, the Syracuse Council received its charter on March 18, 1918.

The only councils predating this one are in New York City, Rochester, Pittsburgh, and Lehigh Valley. The Syracuse Council is still sponsoring the school safety patrol program begun in 1921, plus the industrial safety service and fleet safety contest, both started in 1925.

This council is a division of the Syracuse Chamber of Commerce. Edson G. Moshier of Smith-Corona, Inc., is chairman of the Board of Control. Newell C. Townsend is secretary.

Regional Chairmen Named

Regional subdivisions of the Conference of State and Local Safety Organizations have been established for the Eastern, Mid-

west, and Western states. Subdivisions were created at the managers' workshops following the Conferences of the President's Committee for Traffic Safety in these regions. Creation of a fourth subdivision is expected at Miami Beach after the Southern Conference May 29 and 30.

These subdivisions were authorized by the Conference at its meeting last October. This organization will facilitate meetings of managers more frequently than the annual Congress meeting and will probably result in additional activity among managers throughout the year.

Subdivision chairmen elected by managers at the workshops are: *Eastern*, Harold A. Seward, secretary-treasurer, Lehigh Valley (Pa.) Safety Council; *Midwest*, Dean A. Gorton, manager, Middletown (Ohio) Safety Council; and *Western*, Wm. A. Feathers, managing director, Seattle-King County Safety Council.

By virtue of their selection as chairmen of these subdivisions these managers are also ex officio members of the Executive Committee of the Conference.

Temporary chairmen for the

regional organizational meetings were: *Eastern*, James K. Williams, executive director, Connecticut Safety Commission; *Midwest*, Forst E. Lowery, manager, Greater Minneapolis Safety Council; and *Western*, Clinton W. Dreyer, managing director, Eastbay Chapter, NSC.

Public Support Histories

It has been apparent to many persons in the field of safety that the subject of public support has received a great amount of attention in the past few years. There has been a corresponding lack of specific, concrete information on this subject.

To provide such information, the Field Service Department of NSC has been gathering case histories on how support has been created and used to achieve official traffic measures. About a dozen such case histories will soon be mimeographed and made available to local and state safety organizations and to other interested persons.

Among official measures achieved in these case histories are the model traffic ordinance, separate traffic courts, traffic-engineering bureaus, one-way streets, chemical-test equipment purchase and use, motor-vehicle inspection and high-school driver education, state and city. These measures were obtained on direct request to managers of councils known to have conducted successful and significant public support efforts.

There certainly must be many other examples of public support not so well known but equally valuable to this collection. As the Field Service Department learns of these examples, the staff will seek to obtain information permitting preparation of histories of these cases.

It is expected that eventually



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histories will be available on cases of support for all major measures for accident prevention. This information will serve as a guide for other public support efforts and will make it possible to draw some valid conclusions as to effective practices and procedures of public support.

Are You Fit to Drive?

"Before you take the wheel . . . make sure you are fit to drive. You may think you are in good health. You may have an excellent safety record. Yet, under certain circumstances, it can be dangerous for you to be in the driver's seat! Read through this pamphlet. It contains information about conditions that can affect your driving. And if in doubt—don't take the car out!"

This is the introduction to an attractive 16-page pamphlet, *Are You Fit to Drive?*, prepared by the American Medical Association Committee on Medical Aspects of Automobile Injuries and Deaths. It was written in cooperation with the Center for Safety Education of New York University.

With clever illustrations, the publication gives special attention to the adverse effects on driving of emotional upsets, fatigue, medicine, alcohol, nervous disorders, heart ailments, and visual limitations.

Copies of the leaflet are available from the Association of Casualty and Surety Companies, 60 John Street, New York 38, at \$4.60 per 100 copies.

Inventories Processed

The NSC Inventory Division is now completing the grading of city and state report forms of the Annual Inventory of Traffic Safety Activities.

A total of 1,250 cities and 47 of 48 states submitted reports this year, plus one new participant, Puerto Rico. This is about the same level of participation as last year.

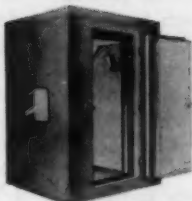
Production of the analyses began in May. The report form for the section on Organization for Traffic Safety Improvement and the scoring procedure for this sec-

—To page 117

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SERIES 400



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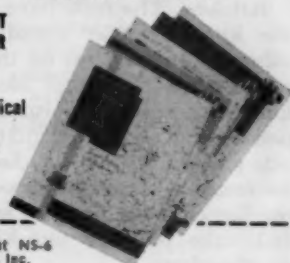
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OFF THE JOB

Safety programs for plant and community

BY HARRY C. JOHNSON

NSC Staff Representative, OTJ Safety Committee

Falls Kill 20,000 in U.S.

LAST YEAR in the United States, over 20,000 persons were killed by falls. Most were falls at the same level, occurring in and around the home. This bit of statistical fact shows our homes are not the secure havens we would like to believe they are.

What do statistics mean to you? They should mean simply: be careful—especially around the home. Or better still, why not take positive steps to make your home a safer place to live in? Let us check a few of the common danger spots.

Scatter rugs. They're slip-proof now. If yours aren't, make them that way by tacking them down firmly or placing non-skid mats under them.

Electric cords. Naturally, we can't be expected to drape them around the walls, over furniture and such, but we can see they are placed in such a manner as to eliminate the possibility of anyone's tripping over them.

Bathtub and shower. Non-skid mats are reasonable enough, at least more reasonable than broken bones or worse. Hand-grips within easy reach are not a bad idea.

Kitchen. The facts have it that the kitchen is far ahead of all other rooms or items on the danger list. Such lethal items as knives sharpened to razor edge, poisons and explosive mixtures—one and possibly all of these can be found in kitchens throughout our fair country. And just as many falls take place in our kitchens as elsewhere.

Wipe up that spilled water or those grease spots. Liquids on floors make slips and slides inevitable. And, if you must reach something on that top shelf, get a ladder.

Ladders, or perhaps the lack of ladders, are a great cause of falls. There's a flower vase on the top shelf and you carry on a bit of conversation with yourself.

"So I should trot out to the garage, haul in the ladder, and move furniture around just to get a vase? Nonsense. I'll pull over that chair, then put a little stool on top of it. It won't reach, so I'll add an upturned cooking pot."

That does it! Go get the ladder and, while you're at it, check the ladder. Is it weak, broken and hastily mended? Does the spreader lock and stay locked? Is there something to firmly support a straight ladder at the base and at the top?

If not, is there someone around capable of holding the ladder in place? Can the ladder be placed so I won't have to reach far from my position on it? Is it high enough so I won't have to climb higher than the third rung down if it's a straight type, or the second rung down if it's a spreader?

If it isn't in good condition, get rid of it and borrow one until you can do something about your own.

—PAUL TURNER, Editor,
Kroehler News,
Kroehler Manufacturing
Company

Mowers Hurt 7 Operators

SEVEN LAWN mower accidents occurred over one recent week end in Washington, D. C., suburbs. One person had the sole of his right foot sliced off when he started a gasoline rotary mower. He had been repairing the mower and failed to replace the rear guard.

A woman from Falls Church, Va., required five stitches to mend the top of her left foot, after the mower she was operating chopped a tin can lid in half and threw it against her foot.

A patent attorney living in Fairfax County, Va., lost the tips of two fingers, when he reached under the mower as it was going.

Other people sustained lesser injuries, but all of these people had to have medical attention and hospital care. Please, be careful of these rotary lawn mowers. They are as dangerous as dynamite.

Loses 3,750,000-to-1 Bet

WOULD YOU bet at these odds? The other day we read of a person who bet \$150,000 to try to win four cents. The poor fellow lost.

Serves him right, you say? Anybody who's so stupid as to make that kind of a bet deserves to lose? Before you make too many statements, let us tell you a little more about the gambler and his bet.

Bill Jones was the bettor. He was a good-natured, friendly sort of fellow with a nice wife and a flock of kids, three or four, we can't remember right off hand.

He liked to bowl and used to get in an occasional round of golf. Liked to make a small bet on the side while he was bowling or golfing. Never lost more than a dollar.

He always put his money on the Yankees at World Series time, which was almost like putting money in the bank. He sure didn't act like the kind of fellow who would risk \$150,000 for four cents.

But he did make this bet while on his way home from work the other night. The traffic light was yellow, but Bill decided to race it and lost to a truck. That's where the \$150,000 and the four cents come in.

Bill was earning \$2.40 an hour. The minute he hoped to save by running the light was worth four cents to him on his time card. The life he lost, just in terms of earning power, was worth about \$150,000.

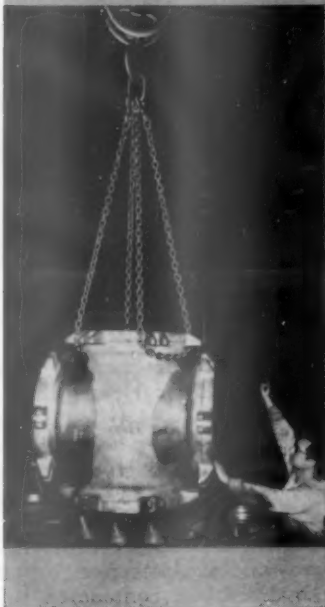
Bill was 35, which meant he could reasonably expect to be able to work for another 30 years. At the time of his death he was earning \$5,000 a year at 40 hours per week, not counting overtime and the many fringe benefits provided by his company.

At \$5,000 a year, Bill could

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Each of these slings is factory proof-tested at a load of no less than twice its rated capacity. Only after a sling has passed this rigorous test is it given the ACCO tag and certificate of registration.

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- 6 Signed Registry Certificate with each sling

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reasonably expect to earn \$150,000 before he retired at 65.

Of course, our particular Bill Jones is fictitious, but last year he had thousands of real-life counterparts who risked a lifetime to gain a few seconds.

No one would sit down to a card game at these odds, but every day Americans face similar odds on the highway and gladly accept the gamble.

They race traffic lights, pass on curves and hills, and speed along at 70 or 80 miles an hour just to gain an extra minute or two. Is it worth it?

—THE WESTERNER,
Western Printing &
Lithographic Company

Device Safeguards Satellite Launching

Five specially-designed infrared gas and liquid analyzers, developed by Mine Safety Appliances Company, Pittsburgh, played a vital safety role in the launching of Explorer III into orbit at Cape Canaveral, Fla.

The five LIRAS serve as continuous and accurate monitors of the hydrocarbon content in the liquid air, nitrogen, and helium streams with which the missiles are fueled and pressurized. Should the hydrocarbon content of any of the streams approach a critical explosive point, the LIRAS, by means of mercury contact switches, shut down the complete operation instantly.

Three of the instruments are located on the launching pad from which the Army Jupiter C was fired to send the third U. S. A. satellite into its elliptical orbit around the earth. Two other LIRAS are mounted in the compressor house of a hangar in which the Jupiter rockets and other missiles are assembled for launching.

The special units at the missile test center in Florida, according to MSA, are comparable in operation to those being used widely in chemical, petrochemical, petroleum refining, and many other industries. In these industries, LIRAS are used to control continuous and batch processes, to determine and control product quality and to measure toxic or explosive gas concentrations.



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You and your employees will like Morton Yellow Impregnated Salt Tablets. These are non-sickening salt tablets, made by a special patented process that uniformly coats the individual salt crystals to control the dissolving rate of the tablet. This controlled dissolving rate means that essential body salt lost through perspiration begins to be replaced, immediately but at a gradual, non-nauseating rate.

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Frequency Down, Severity Up, 1957 Reports Show

THE frequency of disabling injuries among reporters to the National Safety Council was just a shade lower in 1957 than it was in 1956. The severity of injuries was just a shade higher.

Statistically, 1957 was not significantly different from 1956.

In terms of rates, the disabling injury frequency rate ¹ was 6.27 in 1957 compared with 6.38 in 1956; the disabling injury severity rate ² was 740 compared with 733. For 40 major industries for which the Council computes injury rates, the experience for 1957, and

changes from 1956 are shown in the table below.

Additional details of the rates will appear in the 1958 edition of *Accident Facts*, published by the Council in July.

¹Number of disabling injuries per 1,000,000 manhours worked.

²Days charged per 1,000,000 manhours worked.

Industries Plan for Emergency Action

How can the nation's industrial plants meet emergencies and disasters? That was the problem 250 safety and civil defense experts addressed themselves to at the Second Annual Industrial Mutual Aid Conference at Elizabeth, N. J., May 1 and 2.

The conference, jointly sponsored by the Industrial Security Institute and the Linden Industrial Mutual Aid Council (LIMAC), promoted the thesis that the best way to meet emergencies and disasters is for neighboring industries to work together. By setting up emergency plans for mutual aid, the entire emergency facilities of an industrial community can be brought together to fight a disaster occurring at any given plant.

Representatives from plants from various sections of the nation described their plant disaster control plans. Types of industries involved were chemical, steel, utilities, pharmaceuticals, petroleum, and light manufacturing.

Some of the industrial mutual aid plans described were those of the Kanawha Valley (West Virginia) Industrial Emergency Planning Council, the Texas City Industrial Mutual Aid System and the Evandale, Ohio, plan.

A special feature of the conference was a simulated disaster drill at the Bayway Refinery of Esso Standard Oil Company, Linden, N. J. A mock fire and explosion were staged, and rescue of "victims" was conducted with men and equipment from Esso and other member plants of LIMAC.

(The July issue of *NATIONAL SAFETY NEWS* will carry a feature story of the LIMAC exercise.)

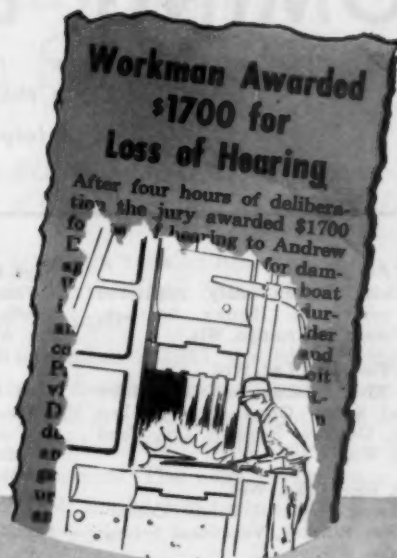
	1957 Injury Rates		Changes 1956-1957 Per Cent	
	Freq.	Sev.	Freq.	Sev.
ALL INDUSTRIES	6.27	740	- 2	+ 1
Aircraft Manufacturing	2.13	198	+11	-13
Air Transport	14.61	626	- *	-21
Automobile	2.57	326	+ *	+16
Cement	2.81	1282	- 9	-19
Chemical	3.55	536	+ 5	+16
Clay Products	10.89	785	+ 8	-32
Communications	1.00	70	+ 1	+21
Construction	19.72	2616	+ 3	+10
Electrical Equipment	1.87	229	- 7	+47
Electric Utilities	6.39	1382	- 7	- *
Food	10.38	595	- 5	-32
Foundry	9.23	842	-11	- 4
Gas Utilities	8.55	447	- 2	-32
Glass	5.68	573	+ 2	+ 6
Iron & Steel Products	9.36	870	+ 7	+13
Leather	9.43	162	+25	+34
Lumber	21.89	2826	- 2	+16
Machinery	5.56	365	- 7	- 8
Marine Transport	26.34	1309	-19	-40
Meat Packing	8.25	440	+ 3	- 5
Mining, Underground Coal†	21.45	7353	- 7	+27
Mining, Except Undgrd. Coal†	20.45	2869	+ 3	+25
Miscellaneous Manufacturing	4.85	353	- 7	+29
Non-Ferrous Metals & Prods.	6.97	1286	-16	+ 4
Petroleum	7.05	712	- 3	-17
Printing & Publishing	6.50	436	+ 8	+14
Pulp & Paper	7.15	696	- 1	-17
Quarry†	11.95	3365	+19	+ 7
Railroad Equipment	6.23	596	+ 6	0
Rubber	2.72	392	-17	+20
Service	5.68	112	- 6	+ 4
Sheet Metal Products	5.02	541	+ 7	- 2
Shipbuilding	4.49	682	- 2	+ 2
Steel	3.48	799	- 9	- 6
Storage & Warehousing	3.35	78	-31	-75
Textile	4.89	333	- 8	-27
Tobacco	4.26	165	+30	+101
Transit	14.42	883	+24	+ 7
Wholesale & Retail Trade	7.99	375	+ 3	+202
Wood Products	11.19	613	+16	-25

† 1956 Rates

* Change less than one half of 1%.

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COMING EVENTS



in the
safety field

June 3, Antigo, Wis.

Wisconsin River Valley regional safety conference. Henry Bannach, Frost Veneer Co., Antigo, Wis.

June 4, Fond du Lac, Wis.

Fox River Valley and Lakeshore Regional Safety Conference. Glen Denker, Damrow Brothers Co., Fond du Lac, Wis.

June 5, Rice Lake, Wis.

Northwest Regional Safety Conference. Wes Burdick, Vocational School, Rice Lake, Wis.

June 9-12, Cleveland, Ohio

Eighth National Materials Handling Exposition (Public Auditorium). Clapp & Poliak, Inc., Exposition Management, 341 Madison Ave., New York.

June 11-12, Bridgeport, Conn.

Thirteenth Annual Connecticut Safety Conference (Stratfield Hotel). A. V. Short, publicity director, 15 King St., Wallingford, Conn.

June 12-14, White Sulphur Springs, W. Va.

Eighty-sixth Annual Meeting, Manufacturing Chemists' Association. (Greenbrier Hotel). Charles E. Wallace, Manufacturing Chemists' Association, Inc., 1625 Eye St., Washington 6, D. C.

June 15-19, Detroit

Semi-annual meeting of The American Society of Mechanical Engineers. L. S. Dennegar, Director of Public Relations, ASME, 29 W. 39th St., New York 18, N. Y.

Aug. 4-5, Denver, Colo.

Women's Seminar for Local Women's Groups (Senate Chambers, State Capitol Building). Colorado Highway Safety Council, Room 14, State Museum Building, Denver 2, Colo.

Sept. 12-14, Glenwood Springs, Colo.

Governor's 1958 Teen-Age Traffic Safety Conference. Colorado Highway Safety Council, Room 14, State Museum Building, Denver 2, Colo.

Sept. 14-19, San Francisco, Calif.

Annual Meeting of American Association of Motor Vehicle Administrators (Fairmount Hotel). AAMVA, 912 Barr Building, Washington 6, D. C.

Sept. 16-18, Cleveland, Ohio

Twentieth Annual Ohio State Safety Conference (Pick-Carter Hotel). H. G. J. Hayes, secretary-treasurer, Ohio State Safety Council, 8 E. Chestnut St., Columbus 15, Ohio.

Sept. 16-20, Copenhagen, Denmark

Fourth International Study Week in Traffic Engineering. World Touring and Automobile Organization, 12 Chesham Pl., London SW1, England.

Sept. 18-19, Rockland, Maine

Thirty-first Annual Maine State Safety Conference (Samoset Hotel). Arthur F. Minchin, secretary, Department of Labor and Industry, State House, Augusta, Maine.

Sept. 22-24, White Sulphur Springs, W. Va.

The Material Handling Institute, Inc. (The Greenbrier). Hanson & Shea, Inc., 1 Gateway Center. Pittsburgh 22, Pa.

Oct. 12-17, New Orleans, La.

American Transit Association (Roosevelt Hotel). ATA, 292 Madison Ave., New York, N. Y.

Oct. 20-23, Philadelphia

International Municipal Signal Association (Sheraton Hotel). IMSA, 130 W. 42nd St., New York, N. Y.

Oct. 20-24, Chicago

Forty-sixth National Safety Congress and Exposition (Conrad Hilton Hotel). R. L. Forney, secretary, National Safety Council, 425 N. Michigan Ave., Chicago 11.

Oct. 26-31, Mexico City, Mexico

Third World Meeting of International Road Federation (Hotel Del Prado and Secretary of Communications Building).

Nov. 3-6, 1958, Philadelphia

Third National Industrial and Building Sanitation Maintenance Show (Convention Hall). Leonard S. Rogers, Orkin Expositions Management, 19 West 44th St., New York 36.

Nov. 10-14, Miami Beach, Fla.

Twenty-eighth Annual Meeting of Institute of Traffic Engineers (Deauville Hotel). David M. Baldwin, executive secretary, 2029 K. St., Washington 6, D. C.

Nov. 28-Dec. 5, San Francisco, Calif.

Annual Meeting of American Association of State Highway Officials (Sheraton-Palace Hotel). AASHO, National Press Building, Washington 4, D. C.

Nov. 30-Dec. 5, New York

American Society of Mechanical Engineers, Annual Meeting. (Statler and Sheraton-McAlpin Hotels). ASME, 29 West 39th St., New York 18.

Urges Eye Protection For Plumbers

"Efforts to reduce eye injuries suffered by journeymen and apprentices in the plumbing trade demands more attention on the part of the mechanic and his employer," William J. Murphy, vice-president of J. L. Murphy, Inc., plumbing, heating, and air-conditioning contractors, said at a recent meeting of the Association of Contracting Plumbers in New York City.

There appears to be a lack of appreciation on the part of many mechanics of need for wearing goggles where chips of stone, metal, or molten lead may strike the eye, he said. The result is a disturbing number of eye injuries.

"Our firm furnishes, without charge, to every journeyman and apprentice one or more pairs of lightweight, well-ventilated goggles," Murphy said. "We find this a good approach, because if a man has forgotten his goggles, he knows we will be glad to give him another pair."

Murphy urged all employees to take a personal interest in eye protection. "Speak to the man on the job yourself," he said. "Let him know you are interested. In addition, issue instructions to superintendents and foremen to be on the alert to see that everyone is properly protected where work dangerous to the eyes is being done."

Gene Murray, president and business manager of New York Plumbers Local Union No. 2, has issued a quantity of safety goggles to the New York Trade School, so glasses will be available for Local 2 apprentices attending the school, Murphy said. These goggles are to be worn while the apprentices receive practical instruction in plumbing work.

Murphy, who also is chairman of the New York State Apprenticeship Committee for Plumbers, urges all local apprenticeship committees in the state of New York to place greater emphasis on eye protection in their training program.

A smart man is a fellow who hasn't let a woman pin anything on him since he was a baby.

"I still have all my toes, thanks to Thom McAn Safety Shoes,"



says **RUSSELL RUFENER**, machine builder at **Ohio Boxboard Co., Rittman, Ohio.**

RUSS RUFENER tells in his own words how Thom McAn Safety Shoes saved him from a serious foot injury:

"On December 2, 1957, the pipe fitting on a small metal-based pump unit I was carrying, came loose and dropped on my foot. The entire assembly fell about 4½ feet. It weighed a little over forty pounds. The edge of the base cut a 2-inch gash in the left toecap of my Thom McAn Safety Shoe.

"If I hadn't been wearing Thom McAn Safety Shoes, I almost certainly would have lost one or more of my toes. As it was, I only received a slight bruise.

"I have been wearing Thom McAn Safety Shoes for nearly 20 years. This is the first time that they have saved me from a serious injury, but this makes them worth while in my book. I would *never* be without them."

Make sure *your* employees are getting maximum on-the-job protection. For information on Thom McAn Safety Shoes or any of Thom McAn's services, check and mail coupon below.

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Thom McAn **SAFETY SHOES**

A Division of Melville Shoe Corporation

Thom McAn Safety Shoe Division, 25 W. 43 St., N. Y. 36

Gentlemen: Please send me the following at once: **E**
(Check services required)

- ☐ Address of nearest Thom McAn Safety Shoe Store
- ☐ Details of Thom McAn's Special In-Plant Fitting Plan
- ☐ Fully illustrated list of Thom McAn Safety Shoes
- ☐ Promotion material, safety posters, etc.
- ☐ Details of Thom McAn's "Special Design" Safety Shoe Service

Name _____ Position _____

Name of Company _____

Address _____

City _____ State _____

NATIONAL SAFETY COUNCIL — AUDITOR'S REPORT, 1957

To the Board of Directors,
National Safety Council:

We have examined the balance sheet of NATIONAL SAFETY COUNCIL (a federal corporation organized not for profit) as of December 31, 1957, and the related statements of income and expenses and source and application of funds for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. We had made a similar examination for the year ended December 31, 1956.

In our opinion, the accompanying balance sheet and statements of income and expenses and source and application of funds present fairly the financial position of National Safety Council as of December 31, 1957, and the results of its operations and the source and application of funds for the year then ended, and were prepared in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

ARTHUR ANDERSEN & Co.

April 17, 1958.

BALANCE SHEETS—DECEMBER 31, 1957 AND 1956

A S S E T S				L I A B I L I T I E S			
	1957		1956		1957		1956
CURRENT ASSETS:				CURRENT LIABILITIES:			
Cash (including \$108,366 in 1957, held by Trustees)	\$ 568,067		\$ 249,090	Accounts payable	\$ 133,955		\$ 176,919
U. S. Government savings bonds, at redemption value	\$ 541,150		\$ 610,797	Accrued expenses and other liabilities	72,627		82,747
Accounts receivable, less allowance for doubtful accounts of \$10,772 ...	\$ 545,760		\$ 497,006	Deferred income—unfulfilled membership and service contracts, etc. .	1,248,875		940,000
Inventories, at approximate cost which is not in excess of market—				Total current liabilities	\$1,455,457		\$1,199,666
Publications and merchandise ...	\$ 629,333		\$ 579,544				
Paper stock, printing and shipping supplies, etc.	80,596		83,252				
	\$ 709,929		\$ 662,796	CONTRIBUTIONS AND APPROPRIATIONS FOR SPECIAL PROGRAMS			
Deposits and prepaid expenses	\$ 97,564		\$ 90,307		\$ 140,084		\$ 106,050
Total current assets	\$2,462,470		\$2,109,996				
FIXED ASSETS, at cost:				RESERVE FOR CONTINGENCIES			
	Gross	Reserves			\$ 300,000		\$ 300,000
Leasehold improvements ..	\$590,313	\$158,318	\$ 431,995				
Furniture and fixtures	277,944	166,170	111,774	NET ASSETS EMPLOYED FOR THE BENEFIT OF MEMBERS:			
Printing machinery and equipment ..	51,074	27,781	23,293	Balance at beginning of year	\$1,117,555		\$1,160,333
	\$919,331	\$352,269	\$ 567,062	Income over or (under) expenses ..	16,436		(42,778)
			\$ 613,275	Balance at end of year	\$1,133,991		\$1,117,555
			\$3,029,532		\$3,029,532		\$2,723,271
			\$2,723,271				

STATEMENT OF INCOME AND EXPENSES FOR THE YEARS ENDED DECEMBER 31, 1957 AND 1956

	1957	1956
INCOME:		
Dues, publications and services	\$4,245,777	\$4,095,186
Contributions	831,858	756,512
Other income	100,376	111,084
	\$5,178,011	\$4,962,782
EXPENSES:		
Publications and materials	\$1,990,541	\$2,123,310
Program administration and research	1,124,732	1,062,657
Administrative and general office (including depreciation and amortization of \$67,281 in 1957, and \$57,975 in 1956)	853,127	770,080
Membership, advertising and services	659,011	564,463
Public information and education	203,636	188,755
Local chapter and council development	285,671	246,453
Contributive fund solicitation	44,857	49,842
	\$5,161,575	\$5,005,560
INCOME OVER OR (UNDER) EXPENSES	\$ 16,436	\$ (42,778)

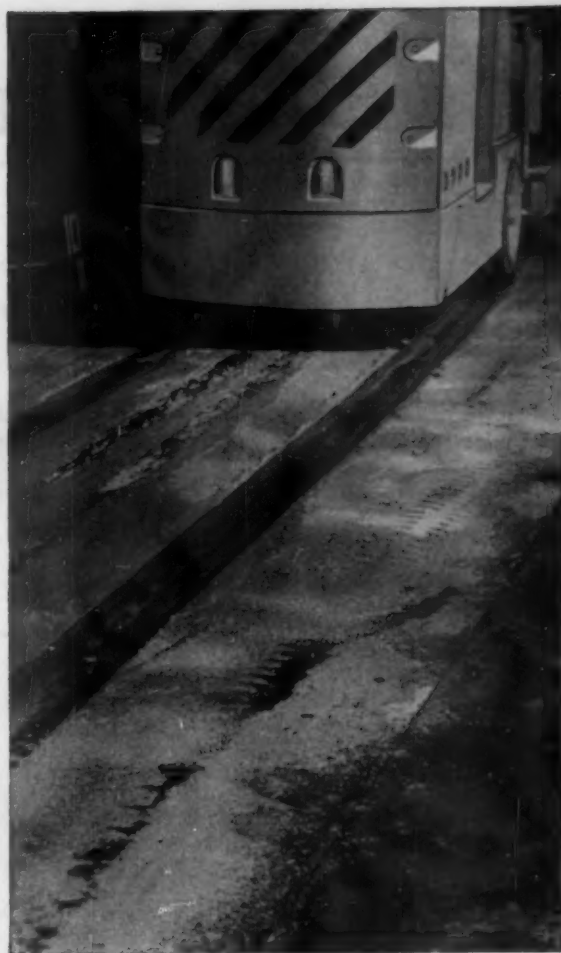
STATEMENT OF SOURCE AND APPLICATION OF FUNDS FOR THE YEAR ENDED DECEMBER 31, 1957

SOURCE OF FUNDS:	
Excess of income over expenses	\$ 16,436
Noncash charges against income (provision for depreciation and amortization)	67,281
Increase in contributions and appropriations for special programs	34,034
	\$117,751
APPLICATION OF FUNDS:	
Net additions to fixed assets	21,068
INCREASE IN WORKING CAPITAL	\$ 96,683

SKID MARKS MEAN TROUBLE



Wyandotte
ZORBALL
makes slippery
surfaces safe!



DANGER . . . heavy equipment out of control! Take the warning when you spot skid marks. Make sure your floors provide sure footing for workers, safe traction for lift-trucks and rolling equipment — with Wyandotte ZORBALL.

ZORBALL is a rugged, all-purpose floor absorbent that eliminates slipperiness due to oil, grease, water, *any* liquid — and keeps floors safe longer because its angular particles resist breakdown. Abrasion-crush tests prove that it remains effective more than twice as long as ordinary floor absorbents . . . and actual skid tests with rolling equipment prove ZORBALL assures nonskid stops when competitive absorbents fail!

What about sweep-up? No problem, because ZORBALL holds up under heavy traffic or extremely wet conditions without mudding, caking, or dusting. What's more, ZORBALL is nonflammable, even when saturated with oil.

ZORBALL is the safest, lowest use-cost floor absorbent on the market today. Use it on floors, steps, ramps, driveways, loading platforms — wherever slipperiness endangers workers or vehicles. Talk today to your Wyandotte jobber or representative about this amazing nonskid floor absorbent. *Wyandotte Chemicals Corporation, Wyandotte, Mich. Also Los Nietos, Calif. Offices in principal cities.*



Wyandotte CHEMICALS

J. B. FORD DIVISION

for

DISTINGUISHED SERVICE



Winners of National Safety Council Awards for outstanding records

FOUR TYPES of awards are given by the National Safety Council to individual members in recognition of outstanding performance in accident prevention:

1. **THE AWARD OF HONOR** is available (a) to units which complete 3,000,000 man-hours without a disabling injury, and (b) to units whose records, though not perfect, meet vigorous standards of excellence. These standards take into account the previous experience of the unit as well as the experience of the industry in which it operates. A unit must qualify on both frequency rate and severity rate.

2. **THE AWARD OF MERIT** has similar, but less exacting requirements. Minimum number of injury-free man-hours needed to qualify is 1,000,000.

3. **THE CERTIFICATE OF COMMENDATION** is available only for injury-free records covering a period of one or more full calendar years and totaling 200,000 to 1,000,000 man-hours.

4. **THE PRESIDENT'S LETTER** is available for injury-free records covering a period of one or more full calendar years and totaling less than 200,000 man-hours.

Details of eligibility requirements may be obtained by writing to the Statistics Division, National Safety Council.

AWARD OF HONOR

City of Albuquerque, Albuquerque, N. Mex.

Amalgamated Sugar Co., Tasco, Rupert, Idaho.

American Telephone & Telegraph Co. Belden Manufacturing Co., Richmond, Ind., Plant.

Bethlehem Steel Co., two awards: Bethlehem Cornwall Corp., Cornwall Mines; Bethlehem Corp., Concentrator Plant.

Burroughs Corp., Schaefer Plant, Detroit, Mich.

California Texas Oil Co. Ltd., Batan-

gas Refinery, Batangas, Luzon, Philippines.

Carrier Corp., 14 plants throughout the entire United States.

Carrier Corp., Syracuse, N. Y.

The Celotex Corp., Marrero, La., Plant.

The Dow Chemical Co., Ludington, Mich. Division.

Food Machinery & Chemical Corp., Westvaco Chemical Division, Green River, Wyo.

General Refractories Co., Claysburg, Pa., Plant.

Harbison Walker Refractories Co., three awards: Birmingham Works; Clearfield No. 2 Works; Hays Works.

GOODYEAR Tire and Rubber Company President E. J. Thomas (left) and F. T. Magennis (right), president of Goodyear International, receive the National Safety Council's Award of Merit from R. A. Manning, Goodyear's manager of safety. The award was made for the company's world-wide operation. In addition to the world-wide award, six individual Goodyear plants won Awards of Merit.



Hercules Powder Co., Brunswick, Ga., Camps.

Hewitt Robins, Inc., Restfoam Div., Buffalo, N. Y.

Holly Sugar Corp., Hardin, Mont.

International Business Machine Corp., Data Processing Machine Division, Rochester, Minn.

Jones & Laughlin Steel Corp., three awards: New York Ore Division, Star Lake, N. Y.; River Transportation Div., Pittsburgh, Pa.; Wire Rope Division, Muncy, Pa.

Lago Oil and Transport Co., Ltd., Aruba, Netherlands West Indies.

Material Service Corp., two awards: Lockport Concrete Pipe Plant, Lockport, Ill.; Lockport Sand & Gravel Plant, Lockport, Ill.

Oak Ridge National Laboratory, Oak Ridge, Tenn.

Radio Corporation of America, Tube Div., Harrison, N. J., Plant.

Republic Steel Corp., two awards: Berger Mfg. Div., Canton, Ohio; Central Alloy District, Massillon Steel Plant, Ohio.

Reynolds Metals Co., Reynolds Mining Corp., Bauxite, Ark.

Sylvania Electric Products Corp., General Office Lighting Div., Salem, Mass.

Tidewater Construction Corp., two awards: North Carolina & South Carolina; West Point, Va.

Union Bag & Paper Corp., Woodland Div., Georgia, So. Carolina, Florida.

U. S. National Advisory Committee for Aeronautics, Lewis Flight Propulsion Laboratory, Cleveland, Ohio.

U. S. Pipe & Foundry Co., General Office, North Birmingham, Ala.

U. S. Rubber Co., Naugatuck Chemical Div., Naugatuck, Conn.

U. S. Steel Corp., three awards: Bradley Transportation Line, Rogers City, Mich.; Gary, Ind., Sheet & Tin Mill; Youngstown, Ohio, District.

AWARD OF MERIT

Abrams Instrument Corp., Lansing, Mich.

ACF Industries, Inc., Buffalo, N. Y., Plant 1.

Aeroquip Corp., Aircraft Couplings & Fittings, Jackson, Mich.

Allegheny Ludlum Steel Corp., Two awards: Research & Development Laboratories, Brackenrich, Pa.; entire company.

Allied Chemical & Dye Corp., Five awards: Detroit, Mich., Division; Nitrogen Division, Orange, Tex.; Nitrogen Division, South Omaha, Neb.; Research Laboratory, Hopewell, Va.; Solvay Process Division, Mutual Chromium Chemicals, Baltimore, Md.

Allis Chalmers Mfg. Co., Two awards: Cedar Rapids, Iowa, Works; Pittsburgh, Pa., Works.

Aluminum Co. of America, four awards: Aluminum Ore Co., Mobile, Ala.; Cressona, Pa., Works; Fabricating, Lafayette, Ind.; Refining Div., Alumina Works, Bauxite, Ark.

Aluminum Co. of Canada, Ltd., Eastern

—To page 118

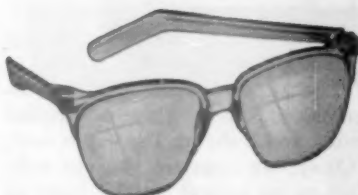
FULL EYE PROTECTION



FOR
PLANT
VISITORS!

NEW

NEW SELLSTROM NO. 100
Guest-Goggles



- Safe Against Semi-Hazardous Conditions.
- Optical Quality Plastic Lens .050" Thick
- Available in Clear or Green
- Comfortable . . . Fit Over Rx Glasses
- Lightweight . . . Low Cost

SELLSTROM GUEST-GOGGLES are designed for plant guest wear and for other semi-hazardous use. They're well styled, light in weight (less than 1 oz.), and extremely rugged in construction. Forward pitched temples allow easy wearing over most prescription glasses.

WRITE today for Sellstrom Bulletin 34-E . . .
plus name of Sellstrom dealer
in your community.

SELLSTROM MANUFACTURING CO.

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Serving Safety Specifically Since 1923

27%
GREATER
COOLING
CAPACITY!



NEW

NEW SELLSTROM NO. 450
Swett-ban



- New Air-Vent Design . . . Pellon Reinforced
- Greater Working Comfort and Safety
- Longer Lasting . . . Easily Cleaned

KEEP COOLER ON EVERY HOT JOB with the new SELLSTROM SWETT-BAN, proved 27% more efficient in sweat evaporation. Keeps perspiration away from eyes and glasses. Perforated cellulose acetate has Pellon fabric backing, rubber headband.

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plus name of Sellstrom dealer
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SELLSTROM MANUFACTURING CO.

222 South Hicks Road • Palatine, Illinois
Serving Safety Specifically Since 1923

Diary of a Safety Engineer

—From page 14

man who is convinced that his work produces a profit for the company. But the fact is that if every staff agency's claims for how much money they save the company were totalled up, we'd find we were making three times as much money as the accounting department has been told about. No, the cuts will have to stand."

I have a flash mental picture

of the near-future: one fiftyish safety director making the rounds of employment agencies in the midst of a recession, bothering his friends, hanging around safety meetings, begging for a job.

A comforting rationalization emerges from the shadows: after all, it isn't my responsibility; I told them; I've warned them what will happen; they have the authority; the blood won't be on my conscience.

But that isn't good enough,

either. It won't be good enough the next time I push my way through a knot of men on the shop floor, and come into the center of the group where the first aid man is working and start assessing the damage before me.

It isn't good enough because if men like me had been stopped every time management proved stubborn, we'd still be in the dark ages of industrial safety work. I am the inheritor of 50 years of work by stubborn and unyielding men—the heroes of safety's early days.

And yet, I was feeling most unheroic as I went into action.

"I can't accept it, and I can't conscientiously let it drop," I said. "I know that the decision is yours, and I blame myself for presenting the facts to you in inadequate terms. My point, as I said before, is that you can't afford to cut down on safety in a depression. In prosperity, it is economically possible. It would be morally wrong, but economically it could be done. But recession tests and proves every efficiency measure. Cutting of costs is essential. To curtail safety work is to increase costs. I can prove it."

The superintendent said, "Go ahead and prove it."

"Give me a week to get my data together," I said.

The super looked at the vice-president, who gave a cynical smile and a shrug. The super said, "Okay, we approve the cut subject to an appeal on the basis of whatever evidence the safety man can present at our next meeting. Now, the next point is . . ."

It's eleven at night, and Sue's making coffee, and the desk in my den is littered with papers with scratchings on them. I've got a headache, and I haven't found yet the way to prove in black and white what I know to be true: that every dollar I've spent on the safety program on the project has paid handsome dividends to management.

How do you show on paper that a young safety man's hunch stopped a fire before it happened? How do you prove in a new enterprise that long hours at a drawing board saved so many fingers at so much a finger? How do you prove anything?

Accidents
cost more
than

ALCOA
ABRASIVE
TREAD
PLATE



An employee slips on a greasy floor and twists his knee. A severe, chronic inflammatory condition results. Medical costs and Workmen's Compensation total \$10,553.77. The employer's accident rate is up. Production time is lost while a new man is trained.

This is just one of 20,000 avoidable slipping accidents in industry every year. Alcoa® Aluminum Abrasive Tread Plate with lasting slip-proof qualities prevents such accidents. Tough particles of fused aluminum oxide in its abrasive surface stay slip-proof even when wet, oily or greasy. It is the only nonskid floor surface that gives you the advantages of corrosion resistance and light weight.

Learn how you can eliminate hazardous conditions on floors, stairs, ramps and other areas. Check the coupon below; write Aluminum Company of America, or call your nearest Alcoa distributor.

Make Your Own 30-Second
Safety Test . . . Check the
Coupon for FREE Sample of
Alcoa Aluminum Abrasive
Tread Plate.



Your Guide
to the Best in
Aluminum Value



Alcoa Abrasive Tread
Plate gives a safe, sure
grip—even when wet,
oily or greasy.



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Exciting Adventure
Alternate Monday Evenings

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Pittsburgh 19, Pennsylvania

I'd like to see how Alcoa Abrasive Tread Plate prevents slipping.
Please send me FREE sample—also application, design and fabricating data.

Name and Title _____

Company _____

Address _____

City and State _____

Circle Item No. 26—Reader Service Card

And if I can't prove anything, can I be sure that 25 years of safety work—almost my whole professional life—has been in any way meaningful?

The coffee's ready, and Sue is quiet across the table. And I remember a night before we were married when she as nurse and I as a safety man stood beside a man with a compound fracture, victim of the kind of stupid, blundering accident that I honestly believe could not happen on this project.

That's true, and its truth is multiplied a hundred times. In my mind, and in the mind of the whole safety movement, is the knowledge that saves life and health.

"There's got to be a way to say it," I thought—thought and said aloud. Sue nodded. "Sure there is. You'll find it. But now you're tired and it's late. Drink your coffee and get some sleep."

Along about dawn the sleep did come. But not the answer—not yet.

(To be continued)

Wire from Washington

—From page 10

executive session "to consider safety procedures and operational uses of nuclear weapons." The Atomic Energy Commission announced that the protection of health and safety is a primary consideration in the conduct of the current nuclear weapons tests in the Pacific Ocean.

The U.S. Department of Labor issued a proposed rule-making order to amend the Child Labor Regulations so as to broaden the exemptions for student learners enrolled in cooperative vocational training program for employment in the occupations declared to be hazardous. Among the reasons advanced by the Secretary of Labor for the proposed change is "the decided increase in safety activities in the vocational education field."

Aviation Safety. Air traffic at airports and along the nation's airways in 1957 reached all-time highs, according to CAA. In 1957, there were over 25 million land-

ings and take-offs at airports having CAA control towers, a 14 per cent increase over 1956.

As a result of a crash, Congressional concerns were expressed on air safety. Senator Monroney decried "dual control of air operations and air space," separately by civilians and military authorities; he promised to introduce legislation to create an independent aviation agency to control civilian and military aviation. A House appropriations subcommittee started investigations of the tragedy. H.C. Res. 258 (Hillings) would establish a joint congressional committee to investigate and make recommendations with respect to the utilization and control of the air space. Quite a few other members of Congress also dealt with the problem of flight safety.

The CAB issued a notice of proposed rule-making for a positive air traffic control experiment, for a one-year period, which would set aside any portion of the air space between 20,000 and 35,000 feet high, and make it

ALWAYS TOPS WITH LINEMEN



FLEX-SAF GLOVES • FLEX-FIT SLEEVES

FREE 32 PAGE CATALOG OF
LINEMEN'S HIGH VOLTAGE
PROTECTIVE EQUIPMENT

Charleston Rubber Company leads the field in manufacturing superior protective products for linemen and high voltage workers. Among CHARCO products are: high voltage protective rubber gloves and sleeves, including "Flex-Saf" Contour Cuff Gloves; "Bulldog" blanket and wire clamps; "Bulldog" utility flag clamp and danger flags; "Charcote" water repellent spray; low voltage gloves; glove protectors and innerliners; canvas storage bags; danger flags; flag standards and other products for safety.

WRITE: LINEMEN DIVISION, CHARLESTON RUBBER COMPANY, 16 STARK INDUSTRIAL PARK, CHARLESTON, S. C.

Circle Item No. 27—Reader Service Card

Used in wide variety of applications throughout industry

Improve workers' safety ... health ... comfort ... efficiency



VANO DESIGN "A" VENTILATOR is used here during repairs to a chemical still. This type ventilator is used to ventilate tanks, tank cars, drums, vats, underground cable manholes, pipe galleries, airplane wing compartments, fuselages and other confined places. Uses 8" diameter flexible canvas tubing ("Ventube").



VANO DESIGN "B" VENTILATOR here discharges welding fumes from double-bottom compartment in naval vessel under construction. Large volume of air handled quickly expels fumes and results in good ventilation. Vano Design "B" can pass through opening only 14" in diameter. Uses 8" diameter flexible canvas tubing ("Ventube").



VANO DESIGN "C" VENTILATOR here withdraws fumes from a reactor kettle. This ventilator can be furnished with 8" suction inlet for 8" non-collapsible suction tubing — or multiple inlet nozzles for 5", 4", and 3" suction hose. The discharge may be connected to 8" "Ventube." Capacities furnished on request.



NO. 2 AIRPLANE HEAT KILLER here directs cool, fresh air on worker in drop forge plant. Heat killers restore workers' efficiency by providing extra ventilation in the hot months, or on any job where workers are continually or periodically required to work in excessive heat. Available in two types, three sizes in each.



VENTAIR DESIGN TE-4 VENTILATOR Gasoline Engine Driven, here delivers air into underground manhole. These ventilators provide fresh air to men in confined places, promoting safety, comfort, and increasing efficiency. Ideal where no electric current is available. Delivers 1700 CFM of fresh air. Uses 8" diameter flexible canvas tubing ("Ventube").



PORTAIR NO. 4 BLOWER EXHAUSTER exhausts fumes resulting from soldering, welding, tank coating, is also used in ventilating small tanks. It is designed to permit attachment of 4" flexible metal hose. Capacity: 425 CFM free air.

ATTACH THIS COUPON TO YOUR COMPANY LETTERHEAD

COPPUS ENGINEERING CORPORATION, 126 PARK AVENUE, WORCESTER 2, MASS. Sales offices in Thomas' Register. Other "Blue Ribbon" Products in Chemical Engineering Catalog, Refinery Catalog, Best's Safety Directory and Mining Catalogs.

Please send me information on supplying fresh air to men working:

- ☐ in tanks, tank cars, drums, etc.
- ☐ in underground cable manholes
- ☐ in airplane fuselages, wings, etc.
- ☐ on coke ovens
- ☐ on steam-heated rubber processes

- ☐ on boiler repair jobs

COOLING:

- ☐ motors, generators, switchboards
- ☐ wires and sheets
- ☐ general man cooling

- ☐ around cracking stills
- ☐ exhausting welding fumes
- ☐ stirring up stagnant air wherever men are working or material is drying
- ☐ drying of walls, sheets, etc., after treated with coating material

Name

Company

Address

City.....Zone...State.....

Write here any special ventilating problem you may have

available only for specifically authorized planes, irrespective of weather conditions. The Board is also preparing a special report for Congress on air-space problems, which will include analyses of in-flight collisions and near misses.

The CAB's proposed agenda for the 1958 Annual Airworthiness Review lists 40 categories of items, including various fire extinguishing systems, emergency exits, life preservers, design and construction, and structural requirements.

Marine Safety. The House Committee on Merchant Marine and Fisheries favorably reported, with amendments, H.R. 11078, to modernize federal boating laws, to promote boating safety and to provide coordination and cooperation with the states in the interest of uniformity of boating laws.

(See "Wire," March and May, 1958). The Committee also issued a report on the progress being made to effectuate its seven recommendations concerning Safety of Life at Sea. (See "Wire,"

February, 1957). It expressed satisfaction with developments in all but one area, that dealing with radio communications in distress cases; the committee urged full study, by all agencies, of "all methods to enhance safety." The Federal Communications Commission issued an order allowing for a 15-month trial of ship-to-ship radio telephone communication for evaluative purposes.

School Safety. Responding to charges that driver training was an expendable frill in America's schools, U.S. Commissioner of Education Derthick said: "If, for example, in a changing and mechanized society, parents feel they want children to be prepared to drive safely, understand automobiles and know how to survive on high-speed turnpikes, then these parents will act to have their schools provide such training and they will not consider it a frill." He added: "I would not have driver education . . . supplant any of the so-called fundamentals."

Polarization Aids Fog Visibility

A polarization technique that greatly increases contrast—and thus visibility—in fog, haze, and smoke has been developed at the Research Division of New York University's College of Engineering. With either visible or infrared searchlight sources, the new method makes it possible to see clearly objects that would otherwise be completely undetectable.

The technique was developed in a project sponsored by the United States Air Force and directed by Alan Nathan, research scientist in the Division.

The basis of the development, Mr. Nathan explains, lies in the optical properties of polarized light. When passed through a polarizing filter of glass or plastic, light rays are made to vibrate in one direction only. Once polarized, these rays can pass through a second polarizing filter only if

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- All tablets sealed in at our factory for cleanliness.
- Mechanism easy to work with one hand.
- All tablets meet applicable federal specifications.

Stock No.	Description	No. of Tablets	Price
FCE6-10ES	One case—6 dispensers	500 enteric coated	\$ 7.92*
FCE6-10RS	One case—6 dispensers	500 impregnated	7.92*
FCEM6-10ES	One case—6 dispensers	1000 enteric coated	11.04*
FCEM6-10RS	One case—6 dispensers	1000 impregnated	11.04*

* Less 10% for 12 cases or more

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NEWARK 4, N.J.

12921 W. WASHINGTON BLVD.
LOS ANGELES 46, CALIF.

955 EAST 152ND STREET
CLEVELAND 10, OHIO

Circle Item No. 29—Reader Service Card

their vibration is in a direction parallel to that of the second polarizer.

The new technique involves the use of a pair of these polarizing filters oriented to pass rays whose vibrations are at right angles to each other. One such polarizer is placed over the light source, and the observer views the illuminated scene through the other. The glare caused by the light scattered from the water droplets that make up haze or fog is blocked from the eyes of the observer by the second polarizer. This happens because the water droplets do not change the polarization of the light they scatter back to the observer. Solid objects, however, do cause some de-

polarization and therefore can be seen by the observer.

The NYU method is somewhat analogous to that of a haze filter on a camera. Just as a camera filter screens out certain colors to make a view cleaner, so a polarizing filter screens out a certain portion of the light bounced back by fog and reveals a more distinct scene.

A pilot making a landing approach at night in a fog would be better able to see the runway if the lights on the ground and his plane lights were cross-polarized. The method also might be useful for checking scenes on the ground.

The technique, it is believed, could supplement or substitute for radar on ships and boats. It

would be especially useful at short range or in crowded harbors, where the effectiveness of radar is limited.

If applied to an automobile's fog lights and windshield visor, Mr. Nathan added, the technique would make visible, even in dense fog, oncoming automobiles and objects in the road.

World Health Congress To Be Held in 1960

The 13th International Congress on Occupational Health—the first to be held in the western hemisphere—will meet in July 1960 in New York City, according to Dr. Leo Wade, chairman of the Organizing Committee and medical director for Esso Standard Oil Company. Several thousand physicians, nurses, industrial hygienists, and other delegates from more than 40 countries will attend, he said.

Theme of the meeting will be *prevention*, rather than *cure*. Program participants from many countries will report their experiences, findings of clinical and laboratory research, and methods for control of job health hazards.

Plans are under way to provide meeting facilities, translation services, accommodations for the visitors, and other arrangements. The congresses are sponsored by the Permanent Committee and International Association on Occupational Health, of which Dr. Sven Forssman of Stockholm is president and Dr. Enrico Vigliana of Milan is secretary.

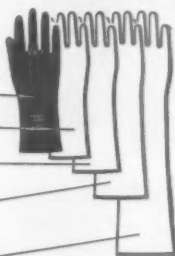
All previous congresses of this organization have been in Europe, beginning with the first meetings in Milan in 1906. The 12th congress was in Helsinki in 1957.

These Stanzoil® Milled Neoprene Gloves ... Guarantee Positive Liquidproof Protection in 103 Basic Oils, Acids, Caustics, Greases, Solvents



Black All Neoprene Stanzails With Non-slip Grip

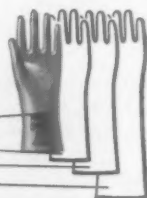
Model	Weight	Fingers	Length
N-31	Light	Straight	10½"
N-35	Light	Curved	10½"
N-32	Medium	Straight	11"
N-36	Medium	Curved	11"
N-41	Heavy	Straight	12"
N-44	Heavy	Curved	12"
N-51	Heavy	Straight	14"
N-33	Light	Straight	14"
N-54	Heavy	Curved	14"
N-71	Heavy	Straight	18"
N-73	Light	Straight	18"
N-74	Heavy	Curved	18"



White All Neoprene Stanzails With Smooth Finish

Model	Weight	Fingers	Length
N-30	Light	Curved*	10½"
NW-31	Light	Straight	10½"
NW-32	Medium	Straight	11"
NW-41	Heavy	Straight	12"
NW-51	Heavy	Straight	14"

*Non-slip



FREE Hand Protection Analysis... Send a description of your job requirements (length, dexterity, wear resistance, chemicals used, importance of safe grip, hot or cold temperature extremes, fatigue factor and sizes) to our "Hand Protection Clinic." New catalog and price list available on request.

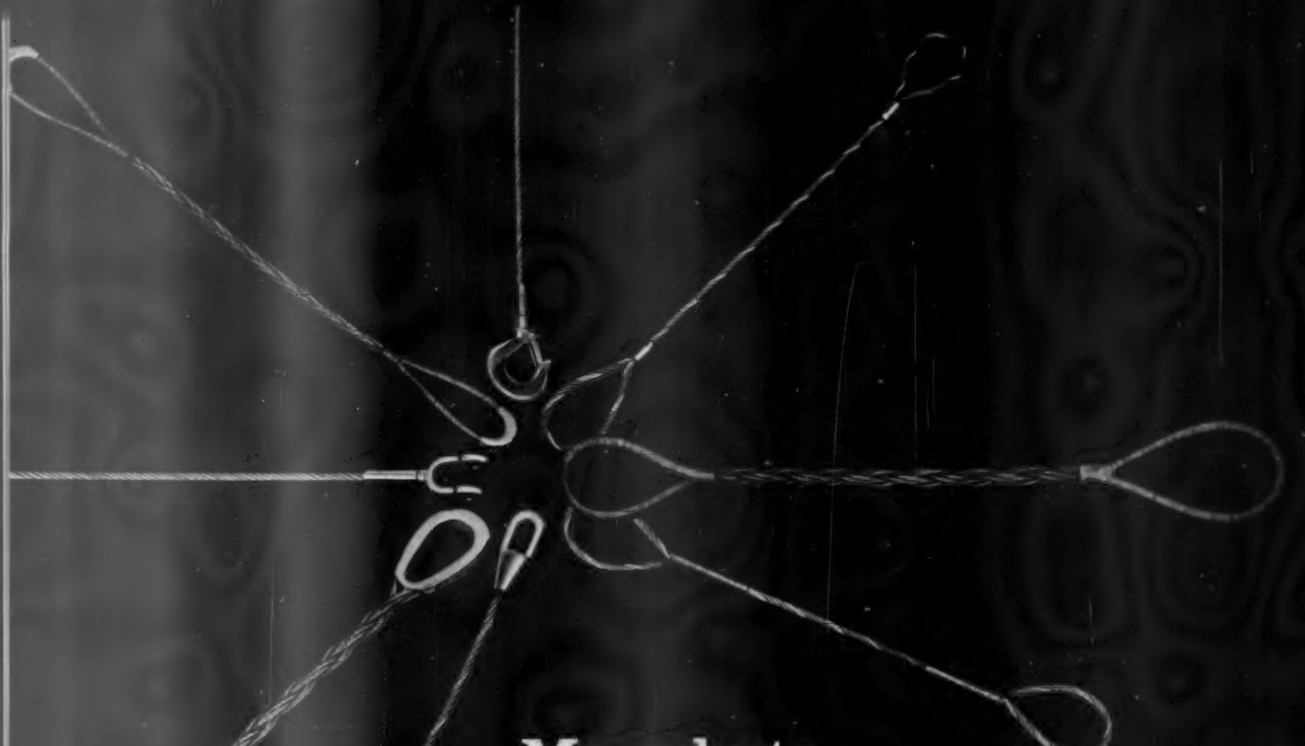
the PIONEER Rubber Company

237 Tiffin Road
Willard, Ohio



"We were lucky. It was the last left-handed screw driver he had."

Circle Item No. 31—Reader Service Card
National Safety News, June, 1958



Macwhyte Factory-Formed Slings . . .

**speed up your
load handling, increase
safety and reduce costs**

Illustrated here are just a few of the many loop eyes and end fittings you can get on Macwhyte *factory-formed* slings and wire rope assemblies. The right combination for *your* slings enables your riggers to hook onto a load and hoist away in jig-time, and fast handling lowers production cost!

These factory-formed slings are made by wire rope craftsmen. Loop-eyes provide full rated capacity. Special power-swaged "Safe-Lock" fittings are "married" to the wire rope in an indestructible bond that won't pull loose, won't slip — always holds fast.

And buying slings that specifically fit your job means safer, easier, faster load handling.



Every sling user should have this free, 90-page booklet! It's packed with "what-to-use" and "how-to" information. If you don't see the sling you want, let us know. We will make slings to your specifications or design them for you. Ask for Catalog S-8.



MACWHYTE

Wire Rope COMPANY

MACWHYTE WIRE ROPE COMPANY

2906 Fourteenth Avenue, Kenosha, Wisconsin

Manufacturers of Internally Lubricated PREformed Wire Rope, Braided Wire Rope Slings, Aircraft Cables and Assemblies, Monel Metal, Stainless Steel Wire Rope, and Wire Assemblies. Special catalogs available.

MILL DEPOSITS: New York 4, 35 Water St. • Pittsburgh 36, P. O. Box 10916, 353 Curry Hollow Road • Detroit 3, 75 Oakman Blvd. • Chicago 6, 228 S. Desplaines St. • St. Paul 14, 2356 Hampden Ave. • Ft. Worth 1, P. O. Box 605 • Portland 9, 1603 N. W. 14th Ave. • Seattle 4, 87 Holgate St. San Francisco 7, 188 King St. • Los Angeles 21, 2035 Sacramento St.

Salesmen Go to School To Learn Life-Saving

Persons who might have died from heat collapse, heart attack, carbon monoxide poisoning, or burns are surviving because salesmen were trained in first aid and rescue work.

Combining sales training and safety engineering, this "school" is operated by Mine Safety Appliances Company, Pittsburgh, Pa., for its trainee and experienced sales engineers.

Included in the course are trips to an experimental coal mine, attendance at meetings of the American Society of Safety Engineers, tours of the company plant and laboratories, and discussions and demonstrations of industrial safety techniques and apparatus.

Although a member of the company's sales force must first learn artificial respiration *without* use of safety equipment, having such gear on hand has saved lives.

For example, one of the firm's agents was attending a friend's wedding in Buffalo, when the

minister collapsed with a heart attack. The salesman dashed out to his car, brought in an automatic artificial respiration device and revived the minister.

Another safety seller was demonstrating this same apparatus to firemen one hot July day. A heat victim was brought into the fire station. The salesman, using the resuscitator, immediately gave life-saving oxygen to the victim.

In McMinnville, Tenn., a representative of the company was demonstrating a mask which "makes" oxygen by combining the wearer's exhalation with a chemical. Just then, the fire alarm sounded.

The sales agent went to the fire and, wearing the mask, was able to advance close to the flames and extinguish them.

One of the firm's Michigan salesmen used a resuscitator to revive children overcome by carbon monoxide on a school bus. In Arkansas a member of the company's selling team happened to be passing by at the time of a highway accident. Having the nec-

essary first aid equipment available, he treated the victims of the mishap for burns, cuts, and bruises.

A few years ago in Mexico City, Mexico, a resident sales representative heard of a tremendous fire raging in an underground silver and zinc mine.

Learning that necessary fire-fighting equipment was not available there, he telephoned his headquarters, in Pittsburgh, specifying needed items. A few hours later the company plane took off from Pittsburgh with safety gear and first aid supplies for men fighting a fire more than 2,000 miles distant.

A few hours more and the equipment was at the scene of the disaster, aiding in fire-fighting operations and recovery of victims . . . another illustration of selling safety by example.

Life is a grindstone. Whether it grinds a man down or polishes him up depends on the kind of stuff he is made of.

**greater safety,
higher efficiency,
lower maintenance costs**

Why risk loss of man-hours and money with inadequate household stepladders or heavy, cumbersome wood ladders?

Demand WERNER Aluminum Industrial Stepladders . . . they're LIGHT — they're RIGHT and the SAFEST Ladder for the job.

Lightweight, easy-to-handle WERNER Industrial Stepladders shrug off rugged service that strains ordinary ladders. They're built for lifetime, heavy-duty use — need no maintenance — can't rust, rot, crack, warp or splinter.



Write for full specifications, prices and your nearest industrial distributor.

R. D. WERNER CO. INC.

295 FIFTH AVENUE DEPT. 3 NEW YORK 16, N. Y.

Werner is the only ladder manufacturer whose complete line—all models—carry the UL's Seal of Approval.



to simplify your industrial hearing test program . . .
check employee hearing faster, more accurately

with the

Beltone®

PORTABLE AUDIOMETER



Model 9-A, \$295. The most widely used audiometer for industrial hearing conservation programs. Model 9-A is equipped with individually equalized double air receivers, instruction manual, pad of audiogram cards, plastic dust cover.



Hearing Conservation Programs play an increasingly vital role in industrial safety plans. To insure against future excessive compensation claims, pre-employment hearing tests by scientific audiometric methods are a necessity.

Experts agree that the Beltone Portable Audiometer gives industry outstanding advantages for testing. Leading companies have turned to the Beltone Portable Audiometer because it gives them these unsurpassed features:

1. **Accuracy**—exclusive one tube electronic circuit and single induction coil assure greater accuracy through trouble free circuits.
2. **Ease of Operation**—large easy-to-read dials allow operator to prepare audiograms quickly, simply, with minimum amount of effort.
3. **Weight**—only 11 pounds—far less than most previous audiometers.
4. **Low Cost**—no other audiometer costs so surprisingly little to buy, service, and maintain.



Model 10-A, identical to Model 9-A, except that it is equipped with calibrated masking tone and bone conduction receiver. Model 10-A, \$350.

Beltone

AUDIOMETERS

made by the Beltone Hearing Aid Company
 WORLD'S LARGEST EXCLUSIVE MANUFACTURERS OF
 AUDIOMETERS AND TRANSISTOR HEARING AIDS
 2900 West 36th Street, Chicago 32, Illinois

Mail coupon today for fully illustrated **FREE** brochure, entirely without obligation. Discover how the portable Beltone Audiometer gives you new advantages for easy, accurate measurement of hearing.

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 that reveals
 all the facts

Audiometer Division
 Beltone Hearing Aid Co., Dept. 9-155
 2900 West 36th St., Chicago 32, Illinois

Rush me, free of charge, full information on the Beltone Portable Audiometer.

Name
 Address
 City Zone State
 Position

Circle Item No. 33—Reader Service Card

Radiation—the Fourth "R"

—From page 35

radioactive phosphorus he was working with. Monitoring showed loss of activity. The answer was so simple he had overlooked it. He was losing bits of blotting paper!

A safety man responsible for area radiation surveys to determine his own plant's contribution to the total count should try to determine whether a stream

or sewer is being dumped into by a doctor's office, a hospital, clinic, or nursing home. He should do his sampling *ahead* of their dumping point.

Site location. There is more involved in setting up an extensive atomic installation than just starting to do the work. The public must be prepared for the idea. The mere mention of the word "radioactivity" panics a large segment of the public.

The industry planning to use

isotopes must have detailed plans of the buildings that will house the isotopes. These plans will be useful in building good relationships with local fire departments, as well essential in obtaining a license from the AEC.

It is vital to bring the water resources board of the state into the plans at a very early stage. This group must be sold before going ahead.

One reason for cooperating with the water resources board is the "Saturday Explorer." This new kind of hobbyist can cause endless trouble for a management trying to improve processes by using radioisotopes. This restless breed buys a Geiger-Mueller counter, makes radiation surveys in the vicinity of a site and turns the results over to the newspapers.

The only protection from the Saturday Explorer is to have thorough background counts on record. Most of his counts will show the same background radiation that existed before the license was even applied for. Some points to sample are stream, lake, and pond beds. The silt should be dried and counted. Animal life in the water should be sampled, as well as plant life. The water, of course, should be sampled. Grass around the site should be counted. The soil itself should be counted. Precipitation is a little more tricky. The count in rain and snow can vary, especially after weapons shots.

The same applies to air samples; background levels of activity in the air are very important.

The more sampling done in advance, the easier it will be to refute charges that the radioisotope work being done in a given area is responsible for activity in the air, earth, or water. The sampling, of course, must be repeated from time to time.

Laboratory Equipment. Ease of cleaning is essential in the laboratory. The goal is a continuous surface of low porosity that is easy to replace. For floors, wood is poor. Bare concrete is poor. There is a liquid tile now available that is showing good results.

Metal partitions can be painted with a strippable paint, but this introduces an explosive vapor

Comes
in
TUBES...



Skin-
Cote
No. 1 & 3

Comes in
JARS...

Provides an invisible film barrier or coating over the skin to protect from irritation with solvents, such as hydrocarbons, carbon tetrachloride, kerosene and degreasing agents. It also supplies an effective barrier protection for the skin against dust-borne irritants, grime and grease . . . send for complete information concerning SKIN-COTE #1 & 3 and other related products that solve the problem of Industrial Dermatitis—

if you have a Skin Problem, consult us.

THE BOYER-CAMPBELL COMPANY

6548 St. Antoine

Safety Division

DETROIT 2, MICH.

Circle Item No. 34—Reader Service Card



"Take a tip from me—

One slip can cost more than **USS** Multigrip™

USS® Multigrip Floor Plate is specifically designed to help protect you against accidents from slips and skids. It will pay you to examine your plant or shop for possible accident-prone areas that could be made safe with Multigrip.* For it provides traction for feet and wheels at all times—in all directions.

Where floor surfaces take a pounding, USS Multigrip supplies a rugged, long-lasting cover. It's made from heavy-duty plate that will last for years without maintenance. Studded with hundreds of risers

in a symetrically designed pattern, their flat tops provide a greater bearing surface, reducing wear and prolonging the non-skid properties. Rugged though it is, it's comfortable to walk on and safe, wet or dry.

You save money on cleaning, too! A quick once-over with a broom or hose will get it spick and span. There are no pockets to hold dirt. Water drains quickly in any direction. Get USS Multigrip from our local distributor near you.

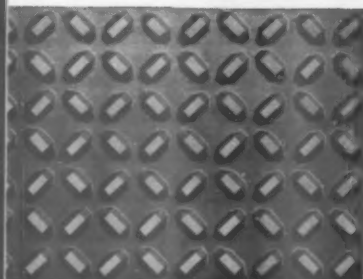
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*TRADEMARK

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One man does it all with MORSE *Barrel-Lift*

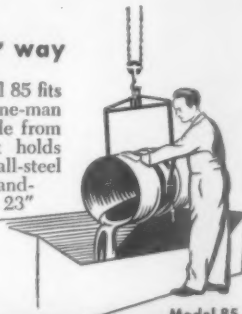
All five drum handling operations—raising, transporting, rotating, tilting and draining—are a one-man job with Morse Barrel-Lift. Keeps 55-gallon steel drums under full control. You save on spilling, overflowing, leakage, damage to drums and accidents. All steel welded construction.



Model 80

Won't tip, Won't spill, Won't leak Move your drums the MORSE *Drum-Karrier* way

The Morse Drum-Karrier Model 85 fits all standard drums, permits one-man operation, is instantly removable from hoist hook. Positive tilt lock holds drum in position. Welded, all-steel construction; accommodates standard double chine steel drums 23" diameter, 36" height.



Model 85

You Can Move It Better
With Morse—for full information, write today!

MORSE MANUFACTURING CO., INC.

765 W. Manlius St., E. Syracuse, N. Y.

STOP SLIPS, FALLS

Trowel on. Dries quickly. Provides safe non-slip footing on all surfaces, wet or dry. Resists oil, chemicals, water and weather conditions. Adheres firmly to wood, concrete and metal. One gallon covers approximately 40 square feet.

FERROX

Write for Free Ferroxx Bulletin.

AMERICAN ABRASIVE METALS COMPANY

AB 142 464 COIT STREET, IRVINGTON 11, NEW JERSEY

Circle Item No. 37—Reader Service Card

hazard during the painting. One way around this is to cover the partitions with masking tape, then paint the tape. In case of contamination, paint, tape, and the excess activity can be stripped off quickly and disposed of in the dry active waste.

When building a "hot cell," higher and higher levels must be anticipated. Inserting the "fudge factor" into the plans will allow the higher levels when they are reached.

Waste Disposal. Radioactive wastes should be handled in polyethylene primary containers and stainless steel secondary containers.

Ordinary wastes that might become contaminated by accident can be caught in retention tanks and sampled for activity before being allowed to flow into the sewage disposal system. In case a tankful is found "hot," it can be concentrated, then disposed of as dry waste.

Decontamination. The definition of contamination is something like the gardener's definition of a weed: "Radioactive material out of place." To carry the figure a step further, when the gardener is fertilizing the soil, he is not obliged to sit on the pile of material to eat his lunch. The radioisotope worker, likewise, can perform highly useful tasks with materials that he wouldn't want in his clothing, bedding, or food.

Housekeeping is quite a chore even with ordinary dirt. It requires education to convince people to keep the work place clean. With radioactive "dirt," the job is even harder. It takes a real selling job to create respect for an invisible hazard.

Shielding. The best protection from radiation is distance. Air itself is a form of shield, but distance isn't always the most practical solution. Very energetic gamma rays, for instance, can travel thousands of feet in air unless they are slowed down by a dense shield.

Alpha shielding is not a serious problem. A thin sheet of polystyrene plastic, or even a few sheets of paper, will protect from the external alpha hazard. The internal hazard is an entirely different matter—inside the body,

National Safety News, June, 1958

national's ND-150 water soluble safety solvent



National's ND-150 is a safe, 100% fire-proof, water soluble safety solvent. It will remove grease, dirt, wax, dye, inks, light carbon, and is safe on metals, concrete, plastic and rubber. ND-150 is completely safe on hands and does not give off noxious or toxic fumes. It cleans by emulsifying the grease and deposits and floats them away... even removes wax from food packaging machinery.

ND-150 is used for cleaning milling machines, lathes, grinders, punch presses and all metal-working machines as well as cleaning concrete floors. It is used

for degreasing metals before magnafluxing. It will clean baked-on grease from kitchen ranges as well as soap scum from shower stalls. ND-150 will remove sludge from the coolant systems of any machine using a coolant system in approximately five minutes.

Depending on the intensity of the deposit to be removed, ND-150 can be used full strength down to a 6 to 1 dilution with water. It is far safer to use than inflammable or toxic solvents such as alcohol or thinners. National's ND-150 is the best, most economical cleaner and degreaser on the market today.



national

DISINFECTANT COMPANY
2417 Commerce, Dallas
906 S. Seventh, St. Louis

NEW M-S-A® SUSPENSION



THE DOUBLE CRADLE GIVES YOU 1 "FIXED-CROWN" CLEARANCE 2 ADJUSTABLE COMFORT

The new M-S-A "Fixed-Crown" Suspension for Skullgard Hats and Caps more than meets the Federal specifications of at least a 1 1/4" crown clearance between the wearer's head and the inside top of the shell.

This crown clearance—so important when a heavy object falls on the hat—is made tamper-proof by a permanently fixed upper cradle providing a built-in margin of safety.

The lower cradle, the one for comfort, is adjustable to the wearer's own personal requirements. But this comfort adjustment won't affect that extra margin of protection in the upper cradle.

In addition to the "Fixed-Crown" clearance, the new suspension offers these other major features: handy locked-in suspension; no pressure points; air cushion sweatband; fast size adjustment; clean, long-wearing plastic webbing.

Get in touch with the MSA man for a demonstration. No obligation. And write us for informative new bulletin.



MINE SAFETY APPLIANCES COMPANY

201 North Braddock Avenue
Pittsburgh 8, Pennsylvania

Circle Item No. 39—Reader Service Card

MAKING A RADIATION SAFETY SURVEY

A. Plan survey:

1. Ascertain objective and scope.
2. Determine radiations and magnitudes to be encountered.
3. Preview geography.
4. Plan action to control surveyor's exposure.
5. Find out to whom to report and status of persons concerned.

B. Select instruments:

1. Pick instruments of adequate sensitivity.
2. Be sure instruments will respond to radiation found.
3. Suitable scanning instruments if source location required.
4. Measuring instruments of accuracy required.
5. Instruments durable enough for survey.

C. Test instruments:

1. Before starting out, check battery condition and zero set ability.
2. Check for radiation response.
3. Be sure calibration is recent and applicable.

D. Don clothing:

1. Protective covering for whatever may contact contamination, such as rubbers, coveralls, gloves.
2. Dose meter if desired or required.
3. Instrument jackets if needed.

E. Proceed to site:

1. Transportation may be part of the equipment required.
2. Be punctual.

F. Check with authority in charge of area in which survey is to be made:

1. Obtain pertinent information.
2. Submit to prevailing safety restrictions.

G. Locate sources:

1. To accomplish objective; by inspection.
2. By special knowledge; by instrument scanning.

H. Determine geometries needed for radiation measurement:

1. To accomplish objective with minimum number of readings.
2. Measure distances accurately.

I. Read radiation meter:

1. Check zero set after adequate warmup.
2. Obtain both window-open and window-closed readings.
3. Note range switch settings for each reading.
4. Be sure meter has reached a steady reading.
5. Recheck zero set after each reading. If not check, repeat reading and zero check.

J. Retire from radiation field:

1. As soon as possible, to minimize exposure.
2. Three or four readings can be remembered until a safe place to record is reached.

K. Log data:

1. Record both instrument reading (including range switch setting) and dose rate indicated by valid calibration.
2. Record geometry accurately.
 - a. Source distribution and location.
 - b. Distance to source to center of instrument ion chamber.
3. Note time of observation.

L. Report findings:

1. Promptly and accurately.
2. First to parties able to take action, then to official archives.

M. Interpret findings:

1. If authorized to do so.
2. To exposed persons or those planning controlled exposure.
3. To surveyor's supervision.
4. Report to surveyor's supervision interpretations made.



HILLYARD FLOOR CARE saves half the Labor!



Hillyard **SUPER SHINE-ALL** **LOOSENS THE DIRT FOR QUICK REMOVAL**

This easy-working cleaner actually surrounds the soil, pries it loose from the floor, breaks it into small particles that float suspended in the solution. The hardest and most time-consuming part of the job becomes the easiest.

Because the dirt is removed so completely when you pick up the cleaning water—and because Super Shine-All deposits no soap scum—rinsing is not necessary—saving half the labor.

In normal cleaning, the entire rinse operation can be omitted!

The big opportunity to save money in floor care is NOT in the pennies spent for materials. Rather, it's in the dollars that go for labor. Super Shine-All can help you save *real money*, by cutting cleaning time as much as half. Here is another proof of the axiom, *Economy in floor maintenance never comes from cheap materials.*

NOTE: Use Super Shine-All effectively and safely on ALL floors, including resilient, terrazzo, etc. It's **CHEMICALLY NEUTRAL**—no free acids, no free alkali, no crystal-forming ingredients, no solvents, no harsh abrasives. U/L approved slip-resistant.

The Hillyard "Maintainer" shows you how to take advantage of modern labor-saving treatment techniques and short cuts. He's your own trained floor care specialist, "On Your Staff, Not Your Payroll".



FLOOR HILLYARD TREATMENTS

ST. JOSEPH, MO.
Passaic, N. J.
San Jose, Calif.

Branches and Warehouse Stocks in Principal Cities

HILLYARD — St. Joseph, Mo.

I-3

- ☐ Please send me full information how to save money in floor cleaning.
- ☐ Please have the nearby Hillyard Maintainer make a FREE survey and recommend treatments for my floors.

Name.....

Firm or Institution.....

Address.....

City.....State.....



**It warns men
he can't!**



BULLARD MECHANICAL Back-Up Alarm

Almost every day on some crowded job site, with trucks maneuvering forwards and backwards, a driver grinds into reverse... rear vision is blocked... then ... tragedy!

This simple, failproof, mechanical back-up alarm never forgets to warn men behind. A loud klaxon-like bell rings the minute wheels turn in reverse. It is a complete self-contained unit that can be easily installed on almost all vehicles with conventional wheels.

Write for technical literature, installation instructions and test reports



E. D. BULLARD COMPANY, Sausalito, California

Circle Item No. 41—Reader Service Card

some alpha emitters seek out bone tissue. Internally there is nothing—not even a sheet of paper—to shield vital organs.

Beta is slightly more penetrating, but a sheet of aluminum will serve as a shield.

Gamma is very penetrating, very injurious. Working with gamma is something like working with powder-actuated tools. One should always ask whether the fellow in the next room is protected.

Instrumentation. The basic instruments for monitoring and surveying are an alpha counter and a beta-gamma counter. There is one type of instrument that measures all three, but for accuracy, at least two counters are needed. Proper instruments will be expensive. They contain tricky circuits, and are built of highly refined materials—materials that have had their own background counts reduced.

A Safety Engineer Looks at Radiation Problems. The radiation safety man who thinks he can wait until they arise to solve his public relations problems should consider the case of Arco, Idaho. When the atomic installation near Arco announced that Arco would be illuminated by power from the experimental boiling water reactor, people objected because they were afraid that the light would contaminate their homes!

There is no choice for the potential user of isotopes—he must convince the public of his good intentions and his ability to carry them out. A copy of every purchase order for an isotope goes from the AEC to the state health agency, so the public has access to knowledge of what materials are being used.

It is far easier to do the public education job first than to get a retraction from magazines or newspapers after they have whipped up hysteria about an atomic installation. An example of the type of information about radiation hazards that reaches the public is an article that appeared in a men's magazine early this year. The title was, "Is Your Plant a Deathtrap?"

The facts, as the title indicates to the sophisticated reader, were badly distorted.

Relationships with the local fire departments can be cultivated in advance. The entire department can be invited to the plant, given a lunch and a tour, and shown the radiation sources. The safety man should spend considerable time with the officers who will be in charge of the groups that will respond to a possible alarm. There is abundant data available from the AEC spelling out fire problems with radioisotopes.

The safety director who does his job here need not be faced with a burning plant that firemen refuse to enter because of the radiation hazards. The AEC has records of past mistakes, so there is no reason to repeat someone else's blunders.

Summary

The students were reminded, though they hardly needed any reminders after their quick look at the vast field of radiation safety, that they were not yet qualified radiation safety experts. To point up the problem of how far they still had to go, they were asked to compare their own training with that of the four young men who served as their instructors at Argonne. These men, Al Januska, Carroll Hampleman, Walter Bleiler, and Bob Wheeler, were recent college science graduates who had just completed 18 months of classroom and field training at Argonne in radiation safety. With this intensive study, these four men admitted they felt very humble about their knowledge of the subject.

The students were assured they had learned some new ways of thinking about radiation problems. The mystery and fear had been stripped away from the subject. They had picked up some nuclear jargon—they now knew how to distinguish between a roentgen and a curie. They appreciated the problems of getting rid of active waste. They knew how to look for more answers.

The course was set up for the plant safety man who knew *nothing* of radiation safety. Every man who completed the course went back to his job feeling that now he knew *something*—now he knew where to begin.

How to make your budget buy more 16mm SOUND PROJECTORS

Whether you need a single projector or a "fleet" of more than 100, here is the machine that can make your budget go further: the NEW Kodak Pageant Sound Projector, Model AV-085.

You pay only \$439* to get famous Pageant performance: sparkling, bright pictures filled with detail, because the Super-40 Shutter gives 40% more light than ordinary shutters at sound speed; easy setups, because reel arms fold into place, without turning a screw; lifetime lubrication, so you need never worry about interrupted schedules.

PLUS these 4 new features:

(1) Eleven-inch speaker in baffle case for full, natural sound. (2) Printed circuits in the new 8-watt amplifier for durability and reliable service. (3) Three-wire power cord to meet all electrical codes. (4) New tungsten carbide pulldown tooth for long, dependable performance.

Let a Kodak Audio-Visual Dealer put the new AV-085 through its paces. Or write for complete details. Either way you're off to a good start toward making your budget buy more.

*List price subject to change without notice.

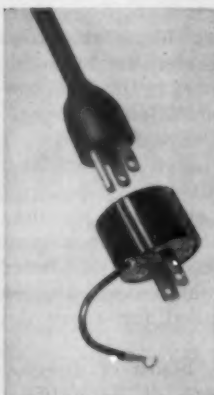
EASTMAN KODAK COMPANY
Dept. 8-V, Rochester 4, N. Y.



With the new Pageant AV-085 you get top performance for just \$439*. This new design incorporates important Pageant features at a price that makes your budget go further.



11-inch oval speaker mounted in baffled enclosure gives full, natural sound. It's matched to the new 8-watt amplifier.

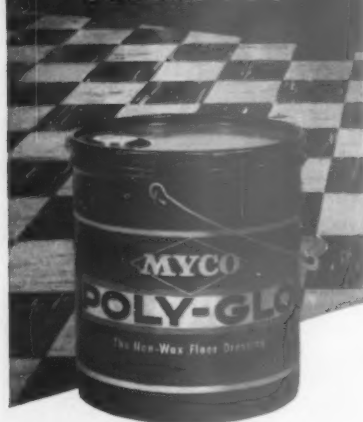


3-wire cord, with 2-wire adapter, meets all electrical codes.



No more worries about lubrication because a Pageant is lubricated for life, always ready to go with the show.

FOR SLIP RESISTANT, EASY TO MAINTAIN FLOORS . . .



*Non-Wax
POLY-GLO*,
the toughest,
brightest finish
for your floors*

*Rated "excellent" by Underwriters' Laboratories' James Machine for slip resistance.

One coat of POLY-GLO outlasts two coats of conventional floor dressings, making it possible to cut floor maintenance time up to 50%. POLY-GLO resists scuffing, heel marking and water spotting, will not yellow. Easy to apply, dries in minutes to a high luster, and removes easily with a neutral cleaner when floors are stripped.

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NS-68

SAD SACK

ON TOP OF unemployment, high cost of living, taxes and traffic, the female form has gone underground.

We expect the grass, trees, flowers and girls to blossom out in the spring. We've been led on by ever encompassing revelations of female charms—and now they've flung the door shut in our face. The sack, balloon, chemise, and trapeze are causing girl watchers' clubs to fold right and left.

I called a gal a bag the other day and she thanked me for the compliment.

Grandma takes Grandpa's nightshirt, puts a bow on it and sashays out to the local set-to. Daughter pretties up her old gym bloomers with a flower and a sequin and is the belle of the ball.

You have to feel sorry for the young blades these days—they might literally buy a "pig in a poke," so to speak. With the frills, colors and cuts of male and female clothes, you have to be darned careful who you whistle at, too.

Missionaries put sacks on the native girls to help promote honorable intentions—but do we need island psychology on Main Street U.S.A.? A friend of mine got sacked from his job the other day, only to go home and find his wife sacked there.

I have a hole in my big toe drilled by a spike heel of one of the bagged little darlings at a Cha-Cha session recently. I had the questionable pleasure of seeing her flip later when the same spike got caught in a floor grating.

The old timers say this is nothing new though. Just a modernized version of the same old jazz they had to face years ago. If we expect to live modern and not crack up, we have to be flexible so as to be able to roll with the punches of new or different hazards to morale and person.

There are all types of sacks. The one you really have to worry about, though, is the one they use to carry you away to the morgue.

You'll be the saddest sack of all if you get dispatched before your time because of some dumb stunt you pull at work, at home, or on the road.

ROBERT D. GIDEL

Sanitation Show to Meet in Philadelphia

The Third Industrial and Building Sanitation Maintenance Show, scheduled for Philadelphia's Convention Hall, November 3-6, will feature important speakers and panel sessions to highlight new advances in the field, the Institute of Sanitation Management show sponsors announced.

J. Lloyd Barron, director of sanitation for National Biscuit Company and president of the sponsoring group, announced that sessions on virtually every sanitation maintenance problem will be scheduled for every day of the show.

The board of directors of the Institute of Sanitation Management will meet during the evenings of the opening day and the

closing day. Election of officers and councils is scheduled for Wednesday morning, November 5, during which the various divisional institutes will also meet to cover regional problems. Divisions of the Institute are: Buildings, Food Processing, Industrial Institutions, Mill and Bakery.

Another highlight of the forum sessions will be an exhibitors quiz meeting the evening of Tuesday, November 5, and the coverage of labor, costs, training, inspection, equipment, floor maintenance and similar subjects the morning of November 6. During the latter, panelists will be on hand to answer questions.

The 1958 show, produced and managed by Orkin Expositions Management, 19 West 44th St., New York 36, is currently accepting space reservations.



**Abdullah hasn't
fallen off once, since he
installed A.W. ALGRIP!**

Now . . . he can even do aerobatics
without ever using a safety belt.

Abdullah knows that traction results from
friction and that A.W. ALGRIP Rolled Steel Floor

Plate provides the best traction possible wherever slipping

might occur.

A.W. ALGRIP is made by a patented process in which grinding wheel
type abrasive is rolled—*not coated*—to a controlled depth, as an
integral part of tough steel floor plate. Wear merely exposes more
abrasive . . . safety lasts for the life of the installation.

Check your plant for areas where slipping hazards may exist.
A.W. ALGRIP provides supersafe footing under the most hazardous
slipping conditions . . . even where water, oil or grease may collect
. . . even on inclined surfaces. A.W. ALGRIP can be installed as
independent flooring or flooring overlay. Send the coupon for
A.W. ALGRIP information, today.

A.W. ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE

ALGRIP—approved for safety by Underwriters' Laboratories

ALAN WOOD STEEL COMPANY

Conschocken, Pa.

Please send A.W. ALGRIP Booklet AL-E27

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Title _____

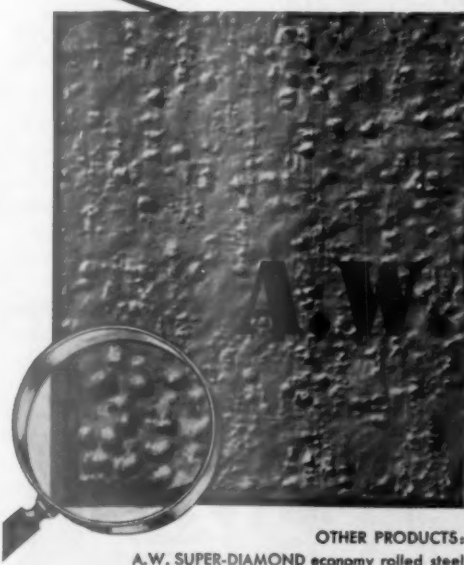
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OTHER PRODUCTS:

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floor plate—Plates—Hot and cold rolled
sheet and strip—(Alloy and Special Grades)

FOR MAXIMUM SAFETY
all over your plant use *Safety* **GRIP-STRUT**



Pat. Pending

the new basic material, all in one piece (including channels), not welded, riveted or expanded in steel or aluminum, in standard sizes and gauges. Safety grip-strut presents an open space, in a diamond pattern, in excess of 55% of the area for ready access of light and air and gives a positive NON-SKID footing in all directions. Ideal for work platforms, stair and ladder steps, flooring, balconies, catwalks, machinery guards, fire escapes and for original equipment safety treads.

Important Safety Features

- ★ Fire proof
- ★ Slip proof
- ★ Maximum strength
- ★ Minimum weight
- ★ Easy to stand on
- ★ Cool in summer — warm in winter

Big Economy Features

- ★ For balconies — no extra light needed below — no extra heat.
- ★ No extra supports necessary — channels are integral part of the material
- ★ No secondary sprinkler heads needed
- ★ Self-cleaning
- ★ Cut and installed like lumber by your own maintenance force
- ★ Low in original cost

Distributors in all principal cities. Consult yellow pages in phone book under "GRATING."

GRIP-STRUT division
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4018 S. PRINCETON AVE. • CHICAGO 9, ILL.

Work Platforms
Flooring
Machine Guards
Balconies

SEND FOR NEW CATALOG

Calendar Contest Winners For March

"



What would your Safety Saying have said?

Walter Menning, machine shop worker for Alpha Portland Cement Co., LaSalle, Ill., won the \$100 first prize in the National Safety Council's "Safety Saying" contest with this line:

Be careful! Use your head, not mine!

The contest appears monthly on the back pages of the Council's calendar. The theme for the March contest was "Look Out For Others."

Second prize of \$50 went to Miss Dorothy Louise Mortensen, secretary for Radio Station WTIC, Hartford, Conn. Her entry was:

I'm a DRIP, too, not looking out for YOU!

Mrs. Brendon Cross, (Individual Member), Concord, N.H., won third prize of \$25 for this line:

View it before you do it!

The 30 winners of \$5 prizes are:

George R. Geier, The Monongahela Connecting Railroad Co., Pittsburgh, Pa.

Ralph J. Cadden, Great Northern Railroad, Brookston, Minn.

Miss Norma Lee Berg, Employers Reinsurance Corp., Kansas City, Mo.

Mrs. H. V. Edwards, The Chemstrand Corp., Decatur, Ala.

Raymond D. Kohler, Doehler-Jarvis Div., National Lead Co., Pottstown, Pa.

James H. Hess, Tampa Electric Co., Tampa, Fla.

Miss Helen Robinson, Pittsburg Junior High School, Pittsburg, Tex.

Mrs. Virgil D. Meyer, Electric

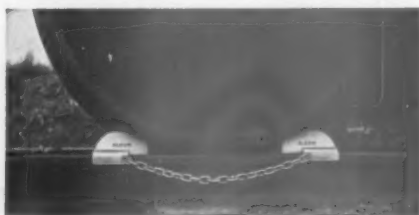


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End Car Creeping—End Run-Aways

Makeshift blockings can cause injury and damage. Protect your employees and equipment. **ALDON Flag Type Wheel Chocks** provide safe, sure and effective blocking of all rolling stock used by railroads, industry, shippers and receivers of carload freight. Available in several styles, painted bright yellow for safety. Instantly attached or detached. Weight only 8 lbs.



DOUBLE-CHAIN TYPE

ALDON Double-Chain Type has two chocks connected with strong chain welded to each block, thus preventing travel in either direction. Handles available. Weight only 10 lbs. Safe, sure and dependable. Finished in maintenance of way yellow.



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THE ALDON COMPANY
Manufacturers

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CHICAGO 13, ILL. GRaceland 2-1828

Thomas Edison

Said

It!



"I start where the last man left off!"

Thomas Edison accomplished many things in his lifetime because he knew how to conserve time. He experimented but he did not waste time performing experiments that had been done by other competent scientists before him . . . he used their *conclusions*.

And so it is with industrial skin cleansers. It is not necessary for you to experiment when one skin cleanser, after many years of actual continuous use, has been found by both large and small industry alike to be the ultimate in GENTLE, THOROUGH, FAST, SAFE and ECONOMICAL

cleansing of the skin. You can safely accept their conclusions based on use experience.

More PAX-LANO-SAV Heavy Duty is used than any other granulated or powdered skin cleanser for the use of both MEN and WOMEN plant workers.

OVER 72 MILLION HANDS ARE WASHED EVERY DAY WITH PAX GRANULATED SKIN CLEANSERS.

The experience and conclusion of industry can be your short cut to the finest skin cleansing at the lowest possible costs.

BBF



LOOK for the PAX ROOSTER and the PAX SEAL. The hallmarks of fine skin cleansers for over thirty years.

G. H. PACKWOOD MANUFACTURING COMPANY

Manufacturing Chemists

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Patent No.
2537265

IT'S LIGHT!

Weights Only 11 Ounces

BROAD VISION DUST and SPRAY HOOD

- Protection from dust and spray.
- Lighter-cooler-unobstructed vision in all directions. No interference with work to be performed.
- Used to advantage on many maintenance and production operations.

● ● **WRITE FOR BULLETIN NO. 42**



Safety Equipment for all Industries

INDUSTRIAL PRODUCTS COMPANY

2850 N. FOURTH STREET • PHILADELPHIA 33, PA.

TOKHEIM High-Vacuum HAND PUMPS for industrial liquids



Here's an all 'round utility pump that saves much more than its cost in speeding production, improving housekeeping, preventing waste. Eliminates slippery floors and liquid accumulation so often the cause of fire and accidents. Delivers 20 gallons per 100 back and forth strokes. Pumps oil and many other liquids. (Write for approved list.) Has hose or spout outlet. Call your dealer, your Tokheim representative, or write factory.

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1670 Wabash Ave. Fort Wayne 1, Ind.

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Factory Branch: 475 Ninth Street, San Francisco 3, California
In Canada: Tokheim-Reader of Canada, Ltd., 205 Yonge St., Toronto, Ont.

Circle Item No. 49—Reader Service Card

Wheel Co., Div. of Firestone Co., Quincy, Ill.

Mrs. Emil Karchnak, Bethlehem Steel Co., Johnstown, Pa.

Mrs. Doris E. Bailey, (Individual Member), Cambridgeport, Vt.

Mrs. R. W. Schulze, Continental Can Co., St. Louis, Mo.

Harold Dye, General Electric Co., Richland, Wash.

Miss Margaret Bakemeyer, Bell Telephone Co. of Canada, Toronto, Ont.

Steve C. Filut, Milwaukee Railroad, Milwaukee, Wis.

Miss Talitha Smith, Henry County Library, McDonough, Ga.

Mrs. Clara Louise Gorsline, (Individual Member), Chicago, Ill.

Miss Edith Phillips, (Individual Member), Santa Monica, Calif.

Edward J. Keating, Consolidated Edison Co., New York.

H. C. Franklin, DuPont Company of Canada, Ltd., Maitland Works, Maitland, Ont.

Louis J. Pourciau, Jr., The Murray Company of Texas, Inc., Dallas, Tex.

Miss Nancy Cunningham, Henry C. Beck Company, Tampa, Fla.

J. E. Ryan, Carnation Co., Fort Dodge, Iowa

Elmer T. Henry, Union Carbide Nuclear Co., K-25 Plant, Oak Ridge, Tenn.

Bernard Girman, Standard Oil Co. (Ind.), Whiting, Ind.

Mrs. E. Widen, (Individual Member), Comox, B.C., Canada

Miss Jane Watts, Plantation Pipe Line Co., Gastonia, N. C.

W. D. Freeman, Alpha Portland Cement Co., Jamesville, N. Y.

Howard Smith, The Atlantic Refining Co., Philadelphia, Pa.

Cecil E. Spearman, Carnation Co., Tupelo, Miss.

Richard Middenforf, (Individual Member), Lyons, Neb.



"You work 20 years on the high iron—then get hurt in a fight with me so we can't collect your accident insurance."

AT WORK OR IN EMERGENCIES:

Why fire hose jacketed with Du Pont "DACRON" outperforms— outlasts ordinary hose

REG. U. S. PAT. OFF.



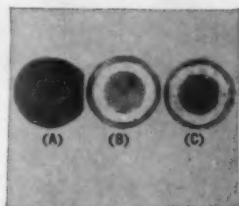
A LEADING PAPER PRODUCER finds hose jacketed with 100% Du Pont "Dacron"® polyester fiber ideal for its operations: Chemical-resistant "Dacron" is unaffected by the caustic substances that are constantly on the ground in the area. And because "Dacron" will not rot or weaken from mildew, hose can be washed and dried on the racks . . . doesn't need frequent testing—a great saving in man hours.

PROVED: Tests show how "DACRON" gives improved performance...



SOIL-BURIAL TEST.

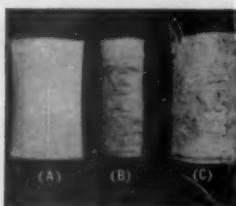
The two samples shown were buried in moist, warm soil for 28 days. When removed, the conventional hose specimen (right) showed signs of damage by bacterial and mold colonies. The specimen with jacket of 100% "Dacron" (left) did not support the growth of microorganisms and was merely soiled.



TABER ABRASION TEST.

In this test, hose specimens were compared for resistance to abrasion. Each test was stopped at the point where the hose had theoretically reached its maximum service life. (A "cycle" represents one complete revolution of the abrading wheel.)

(A) Rubber-covered conventional hose 4,150 cycles
(B) Single-jacket hose of "DACRON" 12,500 cycles
(C) Conventional single-jacket hose 1,830 cycles



CHEMICAL-RESISTANCE TEST.

Here's what happened when three common types of industrial fire hose were immersed in a 17% solution of sulfuric acid for 24 hours.

(A) 2 1/2" hose, single jacket of "Dacron", no apparent damage.
(B) 1 3/4" hose, conventional jacket, damaged.
(C) 2 1/2" hose, "Dacron" and conventional fiber, no damage to "Dacron".

Now hose manufacturers make an easy-handling fire hose that's ideal for both firefighting and operational use around the plant. This hose jacketed with 100% "Dacron" offers unusual versatility because of the "just-right" balance of properties found in Du Pont "Dacron".

First, it's stronger, (hose made of "Dacron" has more than 200 pounds greater test strength than most conventional single-jacket hose) and yet it's about 25% lighter. It is easier to handle, and much more flexible than previous types—gets into action fast in any emergency.

Hose jacketed with "Dacron" is economical to use for maintenance jobs because of its high abrasion resistance. It stands up under day-after-day exposure to most chemicals, too. Hose jacketed with "Dacron" has good resistance to acids, salt water, alcohols, oils, hydrocarbons and detergents. And this new type of hose can't be weakened by mildew . . . remains dependable year after year.

*"Dacron" is Du Pont's trademark for its polyester fiber.

Du Pont makes "Dacron" fiber . . . does not manufacture hose. However, we'll gladly send you names of manufacturers of hose jacketed with 100% "Dacron".



FREE BOOKLET: Outlines properties of hose made with "Dacron". For your copy, write: E. I. du Pont de Nemours & Co (Inc.), 5518-D Nemours Building, Wilmington 98, Delaware.



REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

FIRE HOSE MADE WITH "DACRON"—easier to handle... abrasion-resistant...

not weakened by rot and mildew... costs less in the long run

Circle Item No. 50—Reader Service Card

FOOT-TOE-LEG Protection by "Sankey"



"SANKEY" IMPROVED FOOT GUARD

The metal shield (above) is designed to furnish a maximum amount of protection to the entire front of the foot—not merely the toes alone, but also to the instep against hazards from falling, rolling or flying objects, or from accidental tool blows.

- Absolute freedom of leg motion, utmost protection and comfort come with the leg-contour shaped "Sankey" fibre shin guard (right).
- Fibre knee-shin guard (right) provides flexible knee movement on jobs with both knee and shin hazards.

For more information write today

ELLWOOD SAFETY APPLIANCE CO.

225 SIXTH ST. — NSC ELLWOOD CITY, PA.



Now! **salt** with Vitamins added!

Stop Heat Fatigue Before it Starts!

Hold Down
Hot Weather Accident Rates!

2 SIZES
500 or 1000 Tablets
**CONVENIENT
ALL-WEATHER
SANITARY
EXPENDABLE
DISPENSER**
of Durable Styrene
Plastic

Made and packaged
by USSCO under U.S.
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2,478,182 and D 181,820.
Fully meet Fed. Spec.
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"Pep-Up"

The Original and Highest Quality

IMPREGNATED SALT TABLETS

with VITAMINS B₁, B₂ and C
help maintain full physical efficiency...
each crystal individually coated
for slow, controlled dissolving
WILL NOT CAUSE "SALT SICKNESS"

500 Tablets in Expendable Dispenser 1414
1000 Tablets in Expendable Dispenser 1424
1500 Tablets in Bulk Carton 1431

"Pep-Up" also available Regular Impregnated without Vitamins or—Enteric Coated.

UNITED STATES SAFETY SERVICE CO.

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BRANCHES IN PRINCIPAL INDUSTRIAL CITIES
IN CANADA: FARMELER, LTD.,
TORONTO & MONTREAL

Voice of the Reader

Let's have your views on current topics. You don't have to agree with us

But Texas Has Bigger Ones

BARRIE, ONT. I have just finished reading the excellent article on poisonous snakes in the May issue.

I find that the writer has made one serious misstatement when he states that poisonous snakes are not found north of the southern tip of Canada.

We do have the Massasauga rattler—and plenty of them—as far as 300 miles from the southern tip of Canada. With thousands of our good friends, the American tourists, about to visit Canada on vacation, it might be well to let them know that we do have poisonous snakes in some sections and it would be wise to take the precautions outlined in the article.

The Massasauga rattler is found at least as far north as Sudbury, and, for some reason this species is much more numerous in the Georgian Bay region now than for a good many years.

You will see from the enclosed literature that the situation in Ontario is serious enough for our Provincial Government to set up numerous antivenin depots.

We enclose a picture of a rattler killed near the southern shore of Georgian Bay in August 1955. This one measured 30 inches in length.

—E. G. RENTON, *Safety Officer*
Hydro-Electric Power
Commission

Reporter: "Now that you are wealthy, are you ever bothered for money by the friends you had when you were poor?"

Man-of-Wealth: "I never had any friends when I was poor."

We often dislike people because we expect them to be like ourselves.

An accountant gave us an idea that adds up



"I'd like to be more systematic about my personal accounts," our accountant remarked. "I wish I had a plan to make me *save*, every single payday."

We explained that we have the finest kind of mechanism for regular savings—the plan for buying U.S. Savings Bonds through Payroll Savings. But she had given us an idea. If *she* was not familiar with our plan, there must be many other employees, too, who didn't know we have such a system.

We put in a call for our State Savings Bond Director. He sparked a company-wide plan that told our people about systematic buying of U.S. Savings Bonds. Every person on our payroll received an application card.

Within days we had the best employee participation we've enjoyed since the mid-forties. It showed that people welcome a chance to set up this soundest of investment plans. Today there are more payroll savers than ever before in peace time. Look up your State Director in the phone book or write: Savings Bonds Division, U.S. Treasury Dept., Washington, D. C.



NATIONAL SAFETY COUNCIL



THE U. S. GOVERNMENT DOES NOT PAY FOR THIS ADVERTISEMENT. THE TREASURY DEPARTMENT THANKS, FOR THEIR PATRIOTISM, THE ADVERTISING COUNCIL AND THE DONOR ABOVE

HELP

**STOP ACCIDENTS • CUT TIME LOSS
REDUCE INSURANCE COSTS • SAVE LIVES!**



install and use NEW

MORRISON

REVOLVING CUP GUARDS

... on your portable tools

HELP STOP costly accidents with MORRISON Revolving Cup Guards! Safety codes and laws REQUIRE guard protection. Specify MORRISON for maximum safety... lighter weight... lower cost... greater strength. Full protection for operator with minimum interference with work.

Remember, MORRISON also makes standard wheel guards. There is a MORRISON Guard for every application...all are made to comply with American Standard Safety Code.



See your grinding wheel supplier or write:

MORRISON PRODUCTS INC. 16816 Waterloo Road, Cleveland 10, Ohio

FOR THE BEST IN FIRE PROTECTION

ALWAYS SPECIFY **FROMMELT**

BLANKETS, SHIELDS, CURTAINS

Here's the finest in low-cost, longer-lasting protection for personnel or property... in standard or special sizes to suit your requirements. Select from neoprene-coated WELD-TEX glass cloth (actual tests prove it outlasts asbestos-type fabrics) or TUF-TEX heavy-duty brown vinyl duck. All resistant to fire, water, and mildew.

WELDING SCREENS AND CURTAINS in RAY-TEX aluminum for radiant heat protection, or TUF-TEX and WELD-TEX for spark-flash protection. Low-cost UL approved, in standard or special sizes. PROTECTIVE HEAT CLOTH for protection within inches of 2000° temperature. Made into protective garments, portable fire shields, curtains, panels, or drapes.



WRITE FOR FREE CATALOGS



FROMMELT INDUSTRIES
DUBUQUE, IOWA

The Name to Remember for
Approved Safety Products

Circle Item No. 55—Reader Service Card

New Safety Director For First Army

THOMAS H. AYERS, of New York, has become safety director, First U. S. Army, succeeding Eliot Parker who has been appointed safety director, Communications Zone, U. S. Army Europe.

Mr. Ayers is a native of Petersburg, Va., A lieutenant-commander in the Navy during World War II, he served from August 1943 to June 1946. For a time he was Port Director of the Port of Houston, Tex.

Shortly after graduating from William and Mary College, he joined the Du Pont Company's



Thomas H. Ayers

Spruance Plant in Richmond, Va. From 1934 to 1939 he was safety engineer and safety director, and from 1939 to 1943, production supervisor.

After completing his Navy service he became assistant safety director in the Office of the Quartermaster General, Washington, D. C., and from 1948 to 1949 was safety director for the Chief Quartermaster, Hq. U. S. Army Europe, and Deputy Director of Safety, U. S. Army Europe from 1949 to 1951.

On his return to the United States he became safety engineer in the Office of the U. S. Army Safety Director, Washington, D. C. (1951 to 1954); assistant safety director, Chemical Corps Research and Engineering Command, Army Chemical Center, Md. (1954 to 1956); and from 1956 until his appointment to the



New solvent cleans fast, with greater safety

*Chlorothene makes machine cleaning easy,
reduces fire hazard and can be used safely*

Consider Chlorothene® (Dow 1,1,1-Trichloroethane, Inhibited) for your cold-cleaning jobs—spray, dip, bucket or wipe. This remarkable new solvent does the job fast, and it may be the answer to your safety problems.

Compare the safety features of Chlorothene with the cold-cleaning solvent you are using now. Chlorothene has no flash or fire point by standard testing methods. Toxicity-wise, it has a maximum allowable concentration of 500 ppm.

You'll find plenty of uses for Chlorothene in and around the plant. It readily removes greases, oils, tars, waxes and lubricating compounds. It's an excellent solvent for cleaning electrical equipment, machines, and other metallic and nonmetallic surfaces.

Ask your Dow solvents distributor for Chlorothene. He's the same man who supplies Dow Methylene Chloride, Dow Perchloroethylene, and Dow Trichloroethylene.



Write today for
the Chlorothene book.
THE DOW CHEMICAL COMPANY,
Midland, Michigan,
Dept. SO 1152B-1

YOU CAN DEPEND ON



Circle Item No. 56—Reader Service Card

PUT YOUR EYES BEHIND THIS CUSHION-SOFT, COMFORT-FIT PROTECTION!



New STYLE 5051 – WELSH "SOFT-I," CHIPPERS' COVER GOGGLES

Soft, light, pliable, transparent cups make wearability a reality – fit easily over prescription goggles – mold comfortably to facial contours. Style 5050 with opaque cups and metal baffles for welders.

Patent Pending



STYLE 5070 – WELSH "CYCLOPS" WELDERS' EYE SHIELD

Soft, resilient, one-piece, opaque frame molds comfortably to the face. Has simplified lens holder for easy changing of filter and cover plates. Style 5071 with transparent frame for chippers.

Patent Pending

Write today for quotes and name of your nearest Welsh distributor.

WELSH MANUFACTURING COMPANY
9 Magnolia Street, Providence, R. I.

Circle Item No. 57—Reader Service Card

First Army post he was Chief, Safety Education and Promotion Branch, Office U. S. Army Division of Safety, in the Office of the Deputy Chief of Staff for Personnel.

He is a member of the American Society of Safety Engineers and has served on the Executive Committee of the Washington Chapter. He is also a member of the Armed Forces Chemical Association and of Kappa Alpha fraternity.

Urges Change in Resuscitation Methods

Teaching of manual resuscitation methods should be discontinued in favor of mouth-to-mouth methods, the American Institute of Electrical Engineers was told at its recent East Central Meeting in Huntington, W. Va.

The recommendation was made by Dr. Peter Safar, chief of the Department of Anesthesiology, Baltimore City Hospitals, in a report on new data on resuscitation. Recent experiments, he said, have furnished the following information:

"With the back-pressure arm-lift method, as it is applied in actual emergencies, adequate amounts of air were not moved into the lungs of most non-breathing victims. This method failed because it bent and twisted the neck so that the throat became obstructed. Even when this obstruction was prevented, the method was ineffective when used on obese or 'stiff' victims because the air was moved with too little force.

"Untrained rescuers could breathe effectively for all victims by intermittently inflating the victim's lungs with their inspired air (mouth to mouth).

"The effectiveness of mouth-to-mouth breathing depends on the rescuer who must observe technical details.

"Mouth-to-mouth airway breathing with a special pocket-size breathing tube is more esthetic and easier to perform than mouth-to-mouth breathing.

"We recommend that the teaching of manual methods should be discontinued and mouth-to-mouth methods adopted."

Communication

—From page 19

of the group. It also helps the person making the presentation keep on his subject.

More accurate learning is one of the most important advantages of visual presentations. This is especially important where job skills and safe operations are being learned. Word pictures allow the listener to form his own mental pictures which may or may not be accurate.

In many operations, too much is at stake to rely on verbal instruction alone. Pictures, mock-ups, and diagrams help the employee to visualize the job. Actual equipment, would, of course, be better but this is not always practicable.

Selecting Aids. There is no aid which can be considered best for all situations. Factors to be considered in making the selection include:

1. Effectiveness
2. Size of audience
3. Flexibility
4. Cost

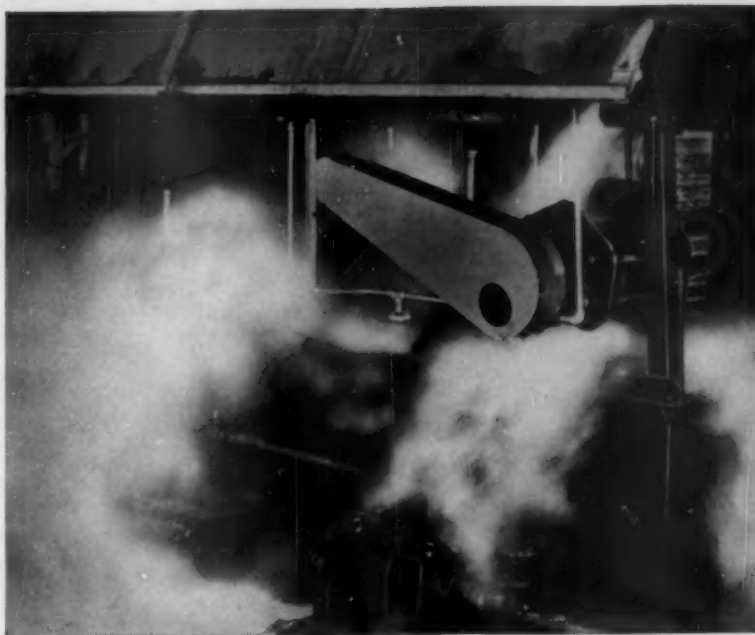
Effectiveness. Depending on the material to be taught, some visuals are more effective than others. Motion pictures, for example, are excellent for creating attitudes and showing general operations. They are not very effective where details have to be explained since the film can't be stopped.

Posters, widely used for bulletin board displays, are also useful for conveying single ideas to small groups. They are less effective where a number of ideas must be presented to a large audience.

To be effective, a visual aid must be large enough to be seen by those in the rear seats of the meeting room. This includes lettering and all other details. A blackboard or flipchart is good for a small group but is ineffective for a large audience.

Flexibility. Some aids, such as motion pictures, cannot be changed once they are made. Others, such as transparencies for an overhead projector, may be changed easily or material added with a grease pencil.

Cost is an item which can't be



STOP QUENCH TANK FIRES THE INSTANT THEY START!

Most dependable fire protection on the market for one of industry's most common fire hazards: A built-in Kidde Fully Automatic Carbon Dioxide Fire Extinguishing System! Kidde systems give you 24-hour-a-day protection, guard even the most dangerous of fire hazards.

Pressure-operated for greatest dependability, Kidde systems use no falling weights, no clumsy mechanical triggering methods. Special rate-of-temperature-rise detectors trigger the system at the first sign of fire, pneumatic control heads insure instantaneous and complete carbon di-

oxide discharge. Automatic electric actuators also are available. In a Kidde system, all moving parts are self-enclosed for safety, and visual indicators show at a glance whether the system is "set" or "released."

WALTER KIDDE & COMPANY, INC.
645 MAIN ST., BELLEVILLE 9, N. J.

Free Kidde Systems Booklet! Get more information on fire protection for your plant! Send this coupon or write to Kidde for Booklet I-19 today!

NAME _____

ADDRESS _____

CITY _____

STATE _____

Kidde



Walter Kidde & Company, Inc.
645 Main St., Belleville 9, N. J.

Walter Kidde & Company of Canada Ltd.
Montreal—Toronto—Vancouver

Circle Item No. 58—Reader Service Card

A FEW DOLLARS IN AMPCO® SAFETY TOOLS

MIGHT HAVE PREVENTED THIS!

What if fire or explosion hit your plant tomorrow? Think of the damage that could be done—the lives and the time that could be lost! Unless you have money to burn, it's simply too expensive to gamble on going without the low-cost protection of Ampco Safety Tools in hazardous areas.

Factory Mutual Laboratories approve Ampco Safety Tools for use in many locations where a hot spark could mean paralyzing disaster.

Ampco has the world's most complete line of safety tools — more than 400 types and sizes — including the Ampco All-Purpose Bung Wrench (shown below) which fits 20 different closures.

Catalog ST-10 tells which Ampco Safety Tools to choose for your particular requirements. Write for free copy today.



AMPCO METAL, INC. Dept. NS-6, Milwaukee 46, Wis.
West Coast Plant: Burbank, Calif. • Southwest Plant: Garland (Dallas County), Texas
In Canada: Safety Supply Co., Toronto, Ont.
Circle Item No. 59—Reader Service Card

ignored. It must be weighed against the potential uses of the aid. Though the initial cost of producing a motion picture (except for short amateur pictures) is high, much of it can be justified where large numbers of employees are to be trained and where anticipated audiences are large. In many instances, however, movie films may be rented at reasonable cost, and a projector is a worth-while investment.

Appraising Visual Aids

Motion pictures. Highly effective for rapid mass instruction and development of attitudes. High potential entertainment value. Films may be rented or purchased. A good 16mm. projector costs about \$350. Home-produced movies with amateur equipment and home talent can often be used effectively. Local color and familiar faces have a strong appeal.

Sound slidefilms. Better suited to step-by-step procedures than movies. Commercially produced slidefilms cost about \$40 a frame. A projector with record player costs about \$250.

Stripfilms. Oral narration can be varied. Projector costs less than \$100. A fairly inexpensive medium.

Slides. Good 2 x 2 slides are effective and inexpensive. Slides are easily stored and can be arranged to fit different situations. May be used with medium-sized groups.

VisualCast. Can be used in a partially lighted room and operated while facing audience. Transparencies are inexpensive. Adaptable to writing, drawing, color, and erasing. Costs about \$240.

Opaque projector. Projects opaque materials, such as photos, drawings and small objects. Machine is bulky and rather awkward to carry. Costs about \$285.

Flannel boards. Effective for presenting key points, illustrations and pertinent facts. Folding types are easy to carry. New paper requires no flocking or sandpaper. A 3 x 4 ft. board costs about \$35.

Flip charts. Convenient, portable, and permanent. Material should be kept simple and not too

much on a page. Can be purchased prepared or homemade. Prepared charts cost about \$10.

Posters. Good for conveying single ideas and getting attention. Posters on a variety of subjects may be obtained from National Safety Council, insurance companies, and other sources. Homemade posters offer great opportunities for originality and ingenuity. Bulletin board displays should be changed at least once a month. One of the least expensive media.

Diagrams. Good for showing details of equipment, also lines of authority in company organization. Symbols may be used for showing electrical circuits and similar presentations.

Graphs. Excellent for presenting facts and figures in concise form and for showing comparisons and percentages.

Pictures. Photos, sketches, and cartoons have important uses in employee publications, manuals, posters, bulletin board displays, and projection. Under favorable conditions, good pictures may be taken with simple cameras but more expensive equipment widens the range and opportunities for taking effective pictures. The mechanics of photography are not difficult to learn but selection of subjects and setting up the scene require imagination and ingenuity.

Cartoons can carry a message without preaching. They give rule books and manuals a friendly, informal air.

Manuals. Good for presenting job information and company policies. A pocket size booklet is best for employees. For supervisory and engineering personnel manuals containing much operating and technical data, a larger size may be preferable. For the latter type, a loose-leaf manual is easier to keep up to date.

Cut-aways. Good for showing details of mechanisms. Cost varies with size and type of equipment.

Models and mock-ups. Should be made to scale. Useful for showing three-dimensional perspective of real object and relationship of parts.

Blackboard. A simple, inexpensive, and effective visual aid. It

Hot Kiln Repaired While Cooling



Aluminized Heat Barrier Garments reduce kiln downtime for Pittsburgh Coke and Chemical Company Cement Plant

A new safety garment reduces kiln cooling downtime before repair work at Pittsburgh Coke and Chemical Company's cement plant. H. J. Haeffner, Plant Superintendent, reports important time and dollar savings through use of the new garments.

They're made of lightweight, flexible 3M Aluminized Fabric that reflects up to 90% of radiant heat. Against "hot spots" of 1800° F, 3M Aluminized Fabric gives workers comfort never before possible. This means faster, more efficient work and less downtime. Lasting up to 50% longer, 3M Aluminized Fabric safety garments are available from leading manufacturers.

Send coupon for details and free sample.

Free Swatches



ALUMINIZED FABRIC

Minnesota Mining and Manufacturing Co., Dept. NW-68, St. Paul 6, Minnesota
Please send me 3M Aluminized Fabric swatches and information.

Name _____ Title _____

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... where research is the key to tomorrow!

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Sure-footed **SAFETY** on the job

GRO-CORD

SLIP-RESISTANT
PUNCTURE-RESISTANT
SAFETY SHOE SOLES



RESISTS-

OIL — HEAT
ACIDS — CAUSTICS

Each of these three Gro-Cord soles is designed for maximum slip-resistance and has density of soiling material to resist punctures. Each sole has been developed to meet specific working conditions and gives greater safety, greater comfort and longer wear.



The handy Gro-Cord Sole Selector tells instantly which Gro-Cord sole is best for any of 30 basic jobs. Write for it today. It makes it easy to "Sell 'em the shoe with the Sole for the Job."

GRO-CORD RUBBER CO.

LIMA, OHIO

Canadian Plant
GRO-CORD RUBBER CO. OF CANADA LTD.
Tillsonburg, Ontario

GC11

Circle Item No. 61—Reader Service Card

is useful for note-taking and listing points of a discussion. It can be helpful in holding the attention of an audience.

Signs. Also important in safety communication are stock or home-made signs for instruction, direction, or warning. These are available in neat enameled metal with messages covering almost every purpose. Commercial signs conform to established standards for design, wording, and color. They should be used only where needed and should be kept clean.

Employee Publications

The period since World War I has seen the development of an important and influential medium of employee-management communication—the employee publication. Originally filled chiefly with gossip and platitudes, these company magazines and newspapers have improved steadily in appearance and content.

An important influence in the growth of these publications has been the work of two organizations—the American Association of Industrial Editors and the International Council of Industrial Editors. Both have done much to raise the standards for publications in the industrial field.

Safety on the job has always been a major interest of the industrial publication; in fact, many of them started as safety bulletins. Many found, however, that enlarging the scope of the publication increased readership and increased its effectiveness as a vehicle for safety promotion. But there is still a place in many companies for the smaller safety bulletin to supplement the larger magazine. It may be beamed at either employees or supervisors.

The influence of the national picture magazines, *Life* and *Look*, has been evident in many industrial magazines—particularly those with ample budgets for art and engravings. Planning the script, staging the scenes, and shooting the pictures is often done with professional skill. Some companies have staff or free lance photographers but more editors and safety men are learning how to use a camera effectively.

These picture stories re-create

accidents, including the events leading up to them and the after-effects, introduce the safety and medical staffs to employee readers and take them on visits to the homes of safe workers. They dramatize the daily activities.

Eye conservation is undoubtedly the most dramatic and appealing phase of accident prevention and it receives the most attention in employee publications. A year ago, **NATIONAL SAFETY NEWS** carried the story of a man who didn't wear his goggles and nearly lost his eyesight. Pictures and brief copy visualized the thoughts that flashed through his mind while his eyes were bandaged awaiting the doctor's report. This article, prepared with imagination and sensitivity, was made available through courtesy of *U. I. News*, published by United Illuminating Company, New Haven, Conn. No feature published in **NATIONAL SAFETY NEWS** ever attracted more attention and the hero of the story became world-famous.

The cover illustration of this issue shows an imaginative treatment of the familiar eye-saved theme. It appeared originally in the Colorado Fuel & Iron Company's *C F & I Blast*. A few years ago *The Blast* published a startling picture of an employee whose face had been singed by an explosion of molten metal—except for the parts covered by his goggles. The effect resembled burnt-cork make-up for a minstrel show. The picture was reproduced in the *Denver Post* and *Time* magazine. The story in the *News* also attracted world-wide attention and requests for prints were received from Great Britain, South Africa, and Australia as well as from all parts of the United States and Canada.

Each year the National Safety Council awards Certificates of Merit for the promotion of safety, with the International Council of Industrial Editors participating in the selection of winners. Among the entries are many excellent safety features and many others which are not submitted are also rendering valued service to accident prevention on and off the job.

National Safety News, June, 1958



Royal McBee Corporation
Hartford, Connecticut



Here's the **ROYAL** way to help build a successful personal hygiene program!

Management at the Hartford, Conn. plant of Royal McBee have been singularly successful in formulating a personal hygiene program that is paying off in better health, employee appreciation and numerous savings.

After extensive research into the problem, Royal management selected SBS-60 Cream Deodorant Soap and Dispensers to spearhead their program because of its multiple advantages: (a) effective cleansing action that combines exceptional detergency with unusual mildness. (b) a cream consistency that makes it almost impossible to waste in either washrooms or showers. (c) provides a drastic reduction in housekeeping and maintenance work. (d) affords a lanolized, antiseptic cream-type soap whose deodorant action is appreciated by both men and women.

If your responsibility is to save money and increase the efficiency of personal hygiene in your plant, we offer the practical help of our service department. Without obligation, these experienced technicians can make a simple soap recommendation or develop a complete personal hygiene program for you.

FREE: Complete descriptive information on SBS-60 Cream Deodorant Soap; SBS-30 Waterless Cleanser; and the complete SBS line of industrial hygiene products. Simply write us today.

Write Dept. 58-F12

SBS

SBS WATERLESS WASHSTATION*

"Brings the Washroom to the Worker"*



MAIN PLANT: 302 Waller St., Saginaw, Michigan
Los Angeles, California • Newark, New Jersey
CANADIAN SUBSIDIARY: Chemical By-Products,
Ltd., 22 Radnor Road, Rexdale, Ontario, Canada

*Trademark

Circle Item No. 62—Reader Service Card

Consultation Corner

—From page 12

from the source you are, the less dose you receive. The shorter the time you work with the source, the less dose you receive. The more shielding material you have between you and the source, the less the dose.

It is suggested that you secure a copy of the National Bureau of Standards Handbook No. 54, *Protection Against Radiation From Radium, Cobalt 60, and Cesium 137* from the Superintendent of Documents, Washington 25, D. C. This publication sells for 25 cents and gives detailed information on these problems. In addition, you will find a large amount of valuable information in Handbook 59, *Permissible Dose From External Sources of Ionizing Radiation* (30 cents) and Handbook 51, *Radiological Monitoring Methods and Instruments* (20 cents).

Returning to your specific question as to some simple rules of safety in the event of an accident,

there are a few basic rules that should be observed.

1. Have survey meters available so the area in question can be monitored. This is the only way you can locate a lost source with any degree of safety.

2. If the source is lost or missing, keep people out of any areas in which it is suspected the source may be. Make this rule absolute, and use physical barriers, if necessary. Allow no one in the area but your monitoring team.

3. With a cobalt 60 source there is no air-contamination problem, and your people need not be concerned with respiratory protection or protective clothing unless there is a possibility the cobalt 60 has in some unusual way been ground to a fine powder. If the gamma source happens to be a ruptured or broken radium needle, respiratory protection (supplied air) and protective clothing must be used.*

4. Warn people not to pick up small pieces of metal fitting the description of your source. This may create some uneasiness, but it is

much better than having someone inadvertently pick up the lost source and put it in his pocket or lunch box, as has happened in the past.

5. If you are unable to locate the source in a short time, notify your nearest Atomic Energy Commission office. Here again, the length of time you look for the source before calling for assistance depends on the activity of the source concerned. If it is highly radioactive, you would notify authorities sooner than if it is a relatively weak source that would not result in a large radiation dose over a period of an hour or two.

*Protective clothing does not prevent exposure from penetrating radiation. However, it will prevent the body from becoming contaminated with dust or mists carrying radioactive particles.

Judge: "You don't really think he meant to put your eye out in the fight, do you?"

Complainant: "No, I don't, but I do believe he tried to put it further in."

SAVE MONEY.. "Gold Medal" LADDERS

Buy Quality-Built

**Last Longer—cost less to use
More safety and design features**

"Gold Medal" Ladders are carefully manufactured of only the best, selected materials. Special features provide maximum strength and safety in use, convenience in storage and light weight for easy handling. Their longer life means lower over-all ladder costs to you.

PS Co's nation-wide sales organization is thoroughly experienced in helping you get the *right* ladders for your needs. Reach your local representative through your 'phone directory under ladders, "Gold Medal".



FOR GREATER SAFETY...EFFICIENCY...ECONOMY



THE PATENT SCAFFOLDING CO., Inc.

33-21 12TH STREET, DEPT. NSN, LONG ISLAND CITY 1, N. Y.
1550 DAYTON STREET, CHICAGO 22, ILL.
Branches in all Principal Cities

This is only one of a complete line of "Gold Medal" Wood Ladders *quality-built* for greater safety, efficiency and economy of use. Included are: Step Ladders for electricians, painters, carpenters and other trades; Heavy-Duty Step Ladders; Single and Extension Ladders and Platform Stages. Write for Catalog L-71-RR.

Circle Item No. 63—Reader Service Card

"Lighting-Off" Explosions

—From page 29

pressure switch closed, keeping the main safety shutoff valve energized so that it could be re-opened even though all burner cocks were not closed.

This bypassing of the safety checking system can be prevented by arranging a small solenoid valve to automatically open and bleed pressure from the piping when the main safety shutoff valve is closed. The small solenoid valve is wired to special contacts in the main safety shutoff valve which hold the solenoid valve closed while the shutoff valve is open.

System Testing. The gas safety control system can easily be tested for proper operation while the oven is idle and the burner cocks are closed. The following procedure is suggested:

1. Observe that indicator on main

safety shutoff valve reads "shut."

2. Remove covers from pressure switches and note that all contacts are in the open position.
3. Close safety circuit switch.
4. Open cock and admit gas to the checking line. If air is used, start combustion air blower and open main blast gate.
5. Note that with all gas safety control cocks closed, checking pressure switch closes and light comes on.
6. Open and close any gas safety control cock and observe closing and opening of checking pressure switch.
7. Check for small flow from bleed orifice to make sure it is not obstructed.
8. Try to open manually the main gas safety shutoff valve. Only if all gas safety control cocks are closed, should it be possible to open this valve.
9. Note that contacts of low-gas-pressure switch close as the

main gas safety shutoff valve is opened.

10. At the completion of the above tests, all gas cocks should be closed, covers replaced, and safety circuit switch left open. The combustion air blower, if any, should be shut down.

If for production reasons the firing of burners cannot be interrupted to shut the oven down for several minutes to make the foregoing tests, the checking pressure switch contacts should at least be inspected to see that they are "open," and the bleed orifice should be examined externally for obstructions.

The inspector should check the covers of safety control devices (safety shutoff valves, pressure switches, etc.) to make sure they are securely held in place by the screws provided. The presence of valves, etc., with covers removed, or loosely attached with only a screw to two, indicates the possibility of habitual tampering for

SPEED OFF-THE-GROUND WORK

WITH PATENT SCAFFOLDING CO., INC.

ALUMINUM Ladders and Rolling Scaffolds

LIGHT • STRONG • SAFE • LAST LONGER • EASIER-TO-HANDLE



New HEAVY DUTY SAFETY PLATFORM STEP LADDER—

Non-slip platforms and steps, safety corrugated. 14½" x 18" platforms, 2' from top. 3¾" wide steps. Rubber feet on both front and back. Heavy duty rear rungs. Platform heights, 3' to 12'. Write for Bulletin L-88.

EXTENSION LADDERS—

Easily adjusted, self-locking, 16' to 40' lengths. SINGLE LADDERS from 8' to 20'. Write for Catalog L-71RR.

4'6"-WIDE LADDER SCAFFOLDS—

Large platform area with two available working levels. Heavy duty wheel, dual-brake steel casters. Spans of 6', 8', 10'. Built-in ladder. Easily added sections increase height. Write for Bulletin AS-7.

29"-WIDE LADDER SCAFFOLDS—

Same features as 4'6"-wide scaffolds. Fit through 30" doorways. Write for Bulletin AS-7.



IMMUNE TO RUST • ROT • MILDEW • CORROSION RESISTANT

P. S. Co's nation-wide sales organization is thoroughly experienced in helping you get the right ladders or scaffolds for your needs. Reach your local representative through your 'phone directory under ladders or scaffolds, "Gold Medal."

FOR GREATER SAFETY...EFFICIENCY...ECONOMY

THE PATENT SCAFFOLDING CO., Inc.

38-21 12th Street, Dept. NSN, Long Island City 1, N. Y.
1550 Dayton Street, Chicago 22, Ill.
Branches in all Principal Cities

FOR CLEAN · SAFE ECONOMICAL FLOOR MAINTENANCE GO **FLORCO**



Hazardous conditions (under foot) created through circumstances beyond control in today's high production cycle in your plant — *Are dollar-dangerous!*

An ounce of preventative maintenance outweighs dollars lost through accident to employees, damage to your equipment and non-productive down-time.

Florco is selectively mined and processed to give the most effective and economical all-purpose adsorbent available.

For the safest and best housekeeping service in your production line without costly applicators or removal equipment,

GO **FLORCO** AND **SAVE!**

Florco is easy and convenient to use:

- Cover area to be treated with a thin layer of Florco—and let set for a few moments.
- Sweep it up—the floor is clean and the hazardous slippery area is eliminated.



SEND TODAY for free demonstrative sample and descriptive pamphlet on Florco. Just enclose this ad with your signed business letterhead.

FLORIDIN COMPANY
ADSORBENTS

Dept. T, P.O. Box 989 Tallahassee, Florida
Circle Item No. 45—Reader Service Card

the purpose of bypassing the safety control arrangement. Where means are furnished, covers of safety shutoff valves should be sealed in place with wire and lead seals, and the condition of the seals checked regularly.

Individual burner cocks should be provided where practical, so that gas can be supplied to the furnace burners one at a time. If the valve arrangement is such that two or more burners must be lighted simultaneously, pilots are necessary. Where fixed pilots are installed, they should be supplied with pre-mixed gas. Zero-governor-inspirator, high-pressure-atmospheric inspirator and gas-mixing machine type mixers are preferable to low-pressure atmospheric inspirators. The pilot gas should be taken from the upstream side of the safety shutoff valve for the main burners.

A mandatory prevention purge period, manual or automatic as practical, should be provided. Where possible, limit switches which require opening

doors and fresh air inlet dampers during the purge period should be employed. The generally accepted purge period is five minutes.

In all cases, a competent operator is the primary factor in safe lighting-off. Whatever safeguards are provided, safety will depend greatly upon the fireman following the proper lighting procedure.

Electric FM Cock. This recent development consists basically of a conventional 2-way lubricated plug cock equipped with a special supervisory switch assembly arranged so the switch contacts are closed only when the cock is closed. (In sizes from 3/4 in. to 6 in., the only Factory Mutual approved electric FM cock is the Fireye FM Supervisory cock available from Combustion Control Division, Electronics Corporation of America, Cambridge, Mass.). It is similar in application to the pneumatic FM cock and may be used at oil as well as gas burners. The pneumatic cock is suitable for use on gas burners only.

Your present degreasing method...



douse the fuse... use
Gunk® the SAFE SOLVENT
for all grease cleaning jobs!

- HIGH FLASH POINT... prevents making your plant a "boom town"
- LOW TOXICITY... no danger of accumulative poisonings
- NO RUST... will not dilute soluble oil coolant and thus invite corrosive rust
- DEGREASES WET SURFACES... displaces water, never losing efficiency... and kills the acid touch of fingers
- FORMULATED FOR SAFETY... as non-burnable solvent by U. S. Coast Guard



*USE GUNK ON ANY SURFACE on which you would use mild soap and water without harmful effect!

THE CURRAN CORPORATION

(Home Office) South Canal St. LAWRENCE, MASSACHUSETTS
Plants → GUNK Chicago Company Chicago 38 (Licensee)

Circle Item No. 66—Reader Service Card



National Safety News, June, 1958

Trucks Quit Fuming, Tobacco Auction Proceeds



CATALYTIC exhaust purifiers on LPG-fueled fork lift trucks solved a major air pollution problem from exhaust gases in tobacco warehouse. Test readings in warehouse showed the purifiers eliminated better than 95 per cent of the carbon monoxide fumes—dropping concentrations from a dangerous 1,000 parts per million to 25 ppm. Warehouses forced to cut back to half-day operations returned to 12- to 14-hour a day schedules.

Catalytic exhaust purifiers have saved what is probably the world's most modern tobacco auction facilities, in southern Ontario, Canada, from threatened shut-down.

Installed on a fleet of 18 propane-powered fork lift trucks ferrying tobacco around the Ontario Flue-Cured Tobacco Marketing Board's three showcase warehouses, the muffler-like purifiers dropped carbon monoxide levels in the warehouses from dangerous concentrations of 1,000 parts per million to concentrations of less than 25 ppm—well within Department of Health regulations.

This rendered the warehouses safe again for buyers, growers, and warehouse personnel.

All three warehouses—cut back to half-day operations during the height of the 1957-58 marketing season by fumes—went back to extended day schedules. Subse-

quent checks show the purifiers continue to eliminate better than 95 per cent of the monoxide fumes, oxidizing them—that is burning them flamelessly—to harmless carbon dioxide and water vapor.

As a replacement for standard

acoustical mufflers, the purifiers—made by Oxy-Catalyst, Inc., Wayne, Pa.—reduce monoxide, hydrocarbons, aldehydes, and other noxious fumes by streaming the exhaust gases through a nest of catalytically-coated rods. The catalyst promotes an oxidation reaction efficiently destroying these elements and thus cleaning up the exhaust stream.

Ontario Flue-Cured Tobacco Marketing Board selected LP-gas fork-lift trucks—together with conveyors—for its handling requirements. Representing an association of some 3,800 Ontario tobacco growers, the Board operates three identical warehouses at Tillsonburg, Delhi, and Aylmer.

These highly mechanized, ultra-modern warehouses are completely heat- and humidity-controlled. They operate under artificial light.

The Board contracted 18 LP gas lift trucks of 2000-lb. capacity which were immediately put to work. In a short time after these vehicles began operations, buyers, growers, and warehouse personnel complained of headaches and dizziness. One man was overcome. Tests showed a concentration of 1,000 ppm of carbon monoxide—a dangerous level for human exposure.

Suppliers and other independent agencies recommended catalytic exhaust purifiers as an answer. While waiting for the units, the Board cut its warehouses back to half-day operations. Since purifiers were installed, there have been no complaints of fumes.



THE National Safety Council's Award of Honor for the 1957 USAF World-Wide Ground Safety Program was presented by Mr. Ned H. Dearborn, left, to Maj. Gen. Jacob E. Smart. Left to right are: Maj. Gen. Raymond J. Reeves, director of military personnel, deputy chief of staff personnel, USAF; Mr. Ned H. Dearborn, president, National Safety Council; Maj. Gen. Jacob E. Smart, assistant vice chief of staff, USAF; Mr. Will L. Tubbs, assistant for ground safety, USAF.

For a More Successful Poster Program



JUMBO POSTER FOR AUGUST, 1958

The Jumbo poster, issued monthly, is designed for outdoor use and is available to members on annual subscription but is not stocked. Its actual size is 9' 11" by 11' 8".

SAFETY BANNER FOR AUGUST, 1958

Here is the attention-getting, monthly cloth banner. Available in two types—indoor and outdoor—both are identical in size (10 feet long by 40 inches high), have the same general message and multi-color design. Indoor type is of sturdy drill with grommets for easy hanging, while the outdoor banner is of extra heavy drill, with wind vents, and has strong stitched-in rope for durability.

POSTERS illustrated on the following pages are new, and actually are printed in two or more colors. For additional selections, see the 756 subjects miniatures in the 1958 Poster Directory. **NOTE:** Directory-listed posters will be stocked until October 1, 1958—at which time a new Directory will be under preparation. Starting October 1st, orders will be filled only as long as stocks are available, unless the demand makes additional printings economically practical.



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1368-A

8½ x 11½

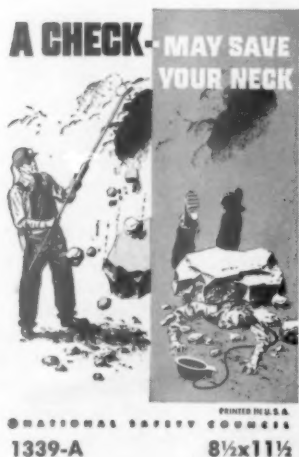
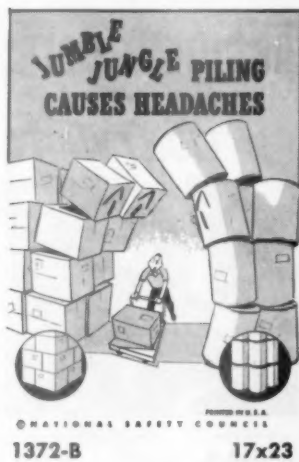
This new four color poster is illustrative of the 72 four color posters shown in the 1958 Poster Directory.



SAFETY Is Our Best Asset

ORIGINAL BARRY KRONICK

Posters below are printed in two or more colors
(Available only in sizes indicated)



Electrotypes of payroll inserts can be furnished in all posted illustrations shown above.

Posters below are printed in two or more colors
(Available only in sizes indicated)



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1263-A 8½x11½



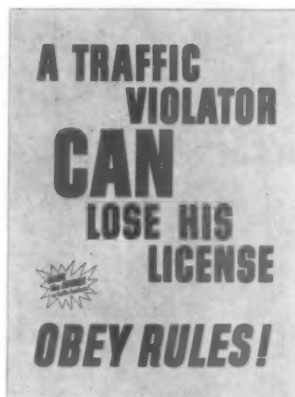
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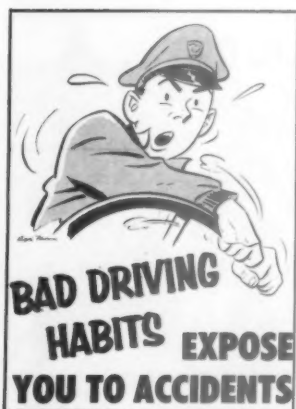
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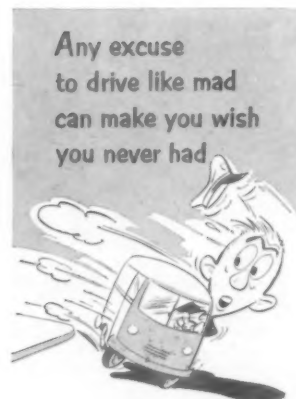
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V-1366-A 8½x11½



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V-1365-B 17x23



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V-1367-B 17x23

Electrotypes of payroll inserts can be furnished in all posted illustrations shown above.

We Know How, But . . .

—From page 21

element and public relations value of accident prevention.

4. Point out the fact that the accident-free job is the clean, profitable job.
5. Reach the small contractor through his industry associations. Give him real assistance and advice through these groups as he may not be able to afford the services within the reach of the larger contractor.
6. Show that accident prevention cannot be accomplished by wishing for it, nor by giving it lip service nor by sporadic half-hearted efforts. Only by constant vigilance, coordinated effort, and effective enforcement can we reach our goal.

Accident prevention in the heavy construction industry still presents a challenge to those engaged in and allied with it. We must not fail to keep the issue alive until we have won the battle for lower accident rates.

Help for Aging Eyes

—From page 47

This device should enable the worker to do a good job in all work positions. The trifocal would naturally be all-purpose to include a clear view of the dashboard when driving. In due time, confirmation was received.

Case History No. 3: Mrs. A. E., age 45, is a laundress and does quite a bit of mending on a sewing machine. This patient complained she could not keep up with the speed required on her production line and feared the loss of her job. Also, she stumbled frequently while wearing her bifocals. Periodic eyestrain symptoms and headaches were common.

Diagnosis—As the patient was compelled to see in the middle range, the symptoms were expected, although the old lenses for distance and reading required practically no change.

A trifocal was prescribed. Progress report—Patient stated complete freedom from eyestrain and was thrilled that she could easily keep ahead of her production quota. She felt new confidence while walking up and down stairs.

Portable Silencer Hushes Jet Noise

A portable jet engine silencer that can be moved anywhere on the field easily and quickly has been developed and test-proved by the Metal Products Division of Koppers Company, Inc., Baltimore, Md. Successful testing of the device at the U. S. Naval Air Station, Patuxent River, Md. has been reported.

The silencer, looking somewhat like a large ear trumpet but having the opposite effect, was designed to prevent much of the tremendous noise of jet engines before the sound gets started. This design differs from most aircraft noise-control equipment which utilizes intricate sound-absorbing materials that serve to suppress the sound rather than prevent it.

Tests conducted at Patuxent by Bolt, Beranek & Newman, acous-

Circle Item No. 67—Reader Service Card

Install 3 Transformers in 30 MINUTES

**with a MoPeCo
TRANSFORMER HOIST**



New MoPeCo Hoist now offers the fastest, safest, most efficient way to install transformers on pole or crossarm. Lightweight (42 lbs.) and portable, hoist has swivel head which permits multiple mounting in minutes. Tested at 3,000 pounds. Easily installed with standard pole chains. Dropped rear sheave prevents cable bind. Cable from truck winch raises transformers. No hazard to linemen. With one-position base mounting and wide range of swivel head, Colorado Central Power Co. now installs 3 transformers in only 30 minutes with MoPeCo!

Write or phone for Complete Details



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"VEKI" SAFETY CAP

Designed for
GREATEST INDUSTRIAL SAFETY

VEKI's larger, roomier, elastic-type snood is designed specifically for enclosing more hair than any conventional type cap . . . full protection for all hair all the time! Front of twill. Back is made of mesh—can also be had in solid or flame-proof materials. Navy blue, and brown. Adjusts to all head sizes. Descriptive literature on request.

Manufacturers and distributors of a complete line of safety clothing and equipment. Write Dept. N-6 for information regarding your needs.



KENNEDY-INGALLS, INC.

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Circle Item No. 68—Reader Service Card

tical consulting firm, show the silencer reduces jet noise by as much as 35 decibels, equivalent to a 95 per cent reduction of impact on the eardrum. This reduction is enough to prevent the disturbing of airport neighbors and danger of hearing damage to maintenance personnel. The silencer does not, of course, afford as great a reduction as sound-treated buildings, or "hush houses," used in extensive tests of engines at high power.

The Koppers silencer, it is claimed, can be used with any type of jet aircraft, single or multi-engine. There is no attachment to the aircraft. The silencer is simply rolled into position behind the engine. A mechanical jack can raise or lower the silencer, and special panels provide extra protection for personnel working at close range. Tests showed no significant loss in engine performance while the silencer was in use.

The Shock That Kills

—From page 54

bridge lamp with an uninsulated screwdriver.

The shock that kills—the bolt of lightning, the mishandling of live power lines, the short-circuited electric guitar or TV set—all these hinge on a heart that is rapidly thrown into ventricular fibrillation (a term that has almost become a household word).

Exactly what takes place in the heart that causes instant death? The heart is composed of four chambers—two on top and two on the bottom, divided by walls with small valves allowing blood to flow into the chambers. The two top chambers are called the right and left auricles divided by the walls; the bottom chambers are called the ventricles, with a corresponding wall.

The heart muscle is peculiar in that it can beat by itself. Its beat is regulated by specialized nerve tissue called the AV node. The impulse travels over the wall between the two, causing the auricles to contract. After the contraction, blood is forced through the opening in the auricles to the ventricles, which swells the right ventricle. When a certain pressure is reached, the heart ventricular muscle contracts, forcing the blood into general circulation. The right auricle squirts blood into the chamber of the right ventricle where it goes into the lungs when the ventricle goes into systole. Blood coming from the lungs pours out into the left auricle (again treating this as a single entity) and blood is forced into the left ventricle.

Under normal condition, there is a split second sequence in the filling of the chambers with the opening and closing of valves following an extremely accurate small time interval. In severe electrical shocks, the impulse distorts the normal sequence, causing the auricles and ventricles to beat independently of each other.

Probably there is a combination of interference with the nerve pathway and the heart muscle function with the loss of heart chamber coordination and failure of the heart pumping action—

Circle Item No. 69—Reader Service Card

SAFETY FACTS for Industry

MOST SAFETY DIRECTORS INSIST ON Safe-Hi LADDER SHOES!



BECAUSE Safe-Hi LADDER SHOES ARE U/L APPROVED FOR ALL SURFACES! THIS EQUIPMENT ENABLES WORKERS TO PERFORM LADDER JOBS WITH SAFETY AND EFFICIENCY—NO NEED OF "HELPER" TO HOLD BASE OF LADDER!

• A 1949 REPORT OF THE N.Y. WORKMEN'S COMPENSATION BD. SUMMARIZING 21,000 FALL ACCIDENTS, DISCLOSED **SLIPPING LADDERS** AS THE PRINCIPAL CAUSE OF LADDER ACCIDENTS.

↑ SELF SHARPENING SPIKE FOR ICE, SNOW, GRAVEL, ETC.

ALSO AVAILABLE—NON-SPARK LADDER SHOES FOR REFINERIES, GRAIN ELEVATORS, MUNITIONS PLANTS AND ALL INDUSTRIES WHERE SPARKS ARE A HAZARD.

DIAGRAM SHOWING ACTUAL HOLDING POWER OF Safe-Hi LADDER SHOES UNDER CONDITIONS INDICATED FROM AUTHENTIC MEASURED TESTS.



SMOOTH IRON-SOAPY
WAITED HARDWOOD - DRY
LINOLEUM-DRY
SMOOTH IRON-DRY
SMOOTH IRON-WET
TERRAZZO-DRY, SMOOTH CONCRETE-WET
WAITED HARDWOOD-WET
TERRAZZO-WET

14° SAFETY ANGLE

35°
29°
25°
20°
15°
10°
5°

OTHER Safe-Hi LADDER ATTACHMENTS



POLE GRIP
HOLDS TOP OF LADDER ON ANY POLE, PIPE OR CONCRETE.



WALL GRIP
HOLDS TOP OF THE LADDER SECURELY AGAINST SMOOTH WALLS.

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DENVER 4, COLORADO

Safe-Hi DENVER

CUT DOWN NOISE

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EARSTOPPER



Soft, comfortable, resilient, the SMR EAR STOPPER adjusts itself to all shapes, turns and movements of the ear canal. Tends to anchor itself in the ear. Has a long life and is reasonable in cost. Furnished in a plastic case. Forty-five cents per set in gross lots.

SURGICAL MECHANICAL RESEARCH INC

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SMR

Free sample when requested on company stationery.

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shock, convulsive seizures, and death. Therefore, in fibrillation of the lower chamber, the functional blood-pushing force is abolished, circulation comes to a speedy end, and death follows in a few minutes.

It is axiomatic that any method devised for resuscitation of such a heart is of no practical importance, as too brief a time exists wherein the heart could survive, even assuming that every available means of rescue were at hand.

This same fibrillation may result from other causes, such as severe chest wall or heart trauma, coronary occlusion, and electric shock. The problem in treatment of less severe shock lies in feeding oxygen without the aid of heart coordination momentarily by artificial and mechanical resuscitation aids. A constant supply of oxygen must be fed to body tissues and the heart itself (coronary circulation) and particularly to the delicate brain cells. If these cells are deprived of blood for even a few seconds there is an anoxia (loss of oxygen) and death of essential cerebral and life-processing cells.

In some cases of lesser shock impulse, immediate artificial respiration and oxygen may keep alive the respiratory center of the brain as well as generalized circulation. This is a most difficult subject to discuss briefly, as thick medical tomes have been written on all phases of the subject. Minor shocks, like minor burns, respond readily to therapy and are not problems as such. The problem lies in prevention and constant vigil on the part of safety and electrical engineers, as well as on the part of the public.

While man may someday take a bus ride on the moon he is still subject to the fundamental laws of his environment: sudden temperature changes, insect bites, strokes of lightning, standing on a wet spot while adjusting those pretty Christmas tree lights. All these can suddenly snuff out the candle of even the staunchest push-button addict.

In spite of all warnings, human nature being what it is, people

will still play with fire, will run known electrical risks. Kipling phrased it neatly in his poem, "The Gods of the Copybook Headings," with these words: "and the burnt Fool's bandaged finger goes wabbling back to the Fire."

A good teacher is someone who can understand those not very good at explaining, and explain it to those not very good at understanding.

Around the Compass

—From page 62

tion differs from previous years. As the analysis will point out:

"The Advisory Committee for this section changed the report form substantially this year in an effort to provide a better measurement of the organizational structure and effectiveness of official and citizen safety organizations.

"The Committee further ex-

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**Still
Supple
after
400° F.**



Specify...

WELDTAN

**HEAT-RESISTANT LEATHER
For Your Work Gloves**

WELDTAN leather gives added SAFETY! Weldtan is super-chrome tanned cowhide split leather. It remains soft and pliable even after exposure to 400° F.

WELDTAN leather is easier to work in! Weldtan has a supple softness that adjusts to every movement of the hand. After being subjected to heat, it has 22.6% less shrinkage than horse split leather.

WELDTAN leather lessens glove costs! Weldtan has 2½ times the abrasion resistance of horse split leather. You have less frequent replacement costs than with any other type of leather.

 **General Split Corporation**

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in all respiratory emergencies.

The "Minuteman" does more for the victim in cases of heart attack, smoke suffocation, electric shock, gas poisoning, etc.

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Interchangeable
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Respirator below

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One of America's foremost manufacturers offers you a complete line of top-quality safety equipment at sensible prices.

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C-256 Chemocart® Respirator. First single chemical cartridge respirator with U. S. Bureau of Mines approval. Lightweight, fits all facial contours.

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Accidents

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1007 Washington Ave., St. Louis, Mo.

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RESPIRATORY PROTECTION

pressed itself as believing that the actual test of a safety organization is the impact it has on the total traffic program. For this reason, it directed that 50 per cent of the score for this section be based on the scores achieved for Sections 3 through 8.

"Although the Summary Sheet gives your 1956 score for Safety Organization, it is suggested that no attempt at comparison be made because of these changes."

Goes to Pakistan

Dr. R. N. Harger of the Indiana University School of Medicine, a pioneer in the field of chemical tests for intoxication, is leaving soon for a two-year stay in Pakistan to teach in a medical school. Nationally known for his chemical-test work, Dr. Harger also has been a leader in the Traffic Division of the Indianapolis Safety Council. He received a small statue of himself at the Central Indiana Safety Conference April 17 in token of his services.

For Distinguished Service

—From page 74

Power Div., Shipshaw, Quebec, Canada.
American Airlines, Inc., LaGuardia Field, Flushing, N. Y.
American Airmotive Corp., Office & Traffic, Miami, Fla.
American Can Co., two awards: Montreal, Quebec, Canada Plant; Marathon Div., Ashland, Wis.
American Cyanamid Co., six awards: Bridgeville, Pa., Plant; Fortier Plant, New Orleans, La.; Panama City, Fla., Plant; Princeton Plant, Penns Neck, N. J.; Surgical Products Div., Danbury, Conn.; Willow Island Works, St. Marys, W. Va.
American Factors, Ltd., Grove Farm Co., Ltd., Puh, Kauai, T. H.
American Oil Co., three awards: Destrehan, La., Refinery; New York, N. Y.; Tankers.
American Optical Co., Southbridge, Mass.
American Radiator & Standard Sanitary Corp., three awards: Baltimore Works, Baltimore, Md.; Kokomo, Ind., Works; New Orleans, La., Works.
American Smelting & Refining Co., Chihuahua, Mexico, Smelter.
American Standard Corp., Richmond, Calif., Plant.
American Synthetic Rubber Corp., Louisville, Ky.
Anaconda Aluminum Co., Columbia Falls, Mont.

Anaconda Wire & Cable Co., Sycamore, Ill.
Anderson Clayton & Co., Mrs. Tucker's Products, Jacksonville, Ill.
Arkansas Oak Flooring Co., Pine Bluff, Ark.
Ashland Oil & Refining Co., River Transportation Dept., Ashland, Ky.
ASR Products Corp., Kingsbury Div., LaPorte, Ind.
Atlantic Coast Line Railroad Co., Property Protection Dept., Wilmington, N. C.
The Atlantic Refining Co., Research & Development, Philadelphia, Pa.
City of Austin, Municipal Government, Austin, Tex.
Automatic Sprinkler Corp., Youngstown, Ohio, Plant.
AVCO Mfg. Corp., American Kitchens Div., Connersville, Ind.
The Bahrain Petroleum Co., Ltd., Persian Gulf, Awali, Bahrain.
Bakelite Co., Bound Brook, N. J., Plant.
Basic Vegetable Products, Inc., Vacaville, Calif.
Bayuk Cigars, Inc., York, Pa.
B. C. Forest Products, Ltd., Cowichan Sawmill, Youbou, B. C.
Belden Mfg. Co., Plant 3, Richmond, Ind.
Bendix Westinghouse Automatic Air Brake Co., Elyria, Ohio.
Berkeley Mills, Inc., Balfour, N. C.
Bestwall Gypsum Co., two awards: Acme, Tex.; Akron, N. Y.
Bethlehem Steel Co., 17 awards: Bethlehem Limestone Co., Bridgeport Quarry; Hanover Quarry; Naginey Quarry. Bethlehem Mines Corp., Johnstown Mines and Randolph Division. Bethlehem Pacific Coast Steel Corp., Fabricated Steel Construction—San Francisco Yard; South San Francisco Works; Torrance Works. Bethlehem Quarry. Fabricated Steel Construction—Johnstown Works; Pittsburgh Erection District; Western Erection District. Shipbuilding Div.—Baltimore Yard; Beaumont Yard. Sparrows Point Foamed Slag Plant. Steelton Plant. Bethlehem Supply Company, Tulsa Plant.
E. W. Bliss Co., Hastings, Mich., Division.
Boise Payette Lumber Co., Plant B, Emmett Mills, Emmett, Idaho.
Borden Co., Manufactured Products Div., Madison, Wis.
Borg Warner Corp., Ingersoll Products, Kalamazoo, Mich. Div.
Bowman Dairy Co., Office, Chicago.
C. Brewer & Co., Ltd., Hutchinson Sugar Plantation Co., Naalehu, Kau, Hawaii.
Brown & Bailey Co., Philadelphia, Pa.
Buckeye Cellulose Corp., three awards: Cell & Spec. Div., Memphis, Tenn.; Hollywood Mill, Memphis, Tenn.; Selma, Ala., Mill.
F. N. Burt Co., Inc., Buffalo, N. Y.
Cabot Carbon Co., Walton Plant, Kermit, Tex.
California Institute of Technology, Pasadena, Calif.
California Electric Power Co., S. E. California and Nevada.
Canadian Arsenals, Ltd., Explosives

Div., Valleyfield, Que., Canada.
Canadian Gypsum Co., Ltd., Hagersville, Ont., Canada.
Canadian Industries, Ltd., six awards: Beloeil Fertilizer Works, Masterville, Quebec; Central Research Laboratory, Masterville, Quebec; Chatham, Ont., Works; Edmonton Works, Calgary, Alberta; James Island, B. C., Works; Montreal Bldg.
Canadian Salt Co., Ltd., Windsor, Ont., Works.
Canal Zone Government, two awards: Panama Canal Co., Engineering and Construction Bureau, and Marine Bureau.
Carling Brewing Co., Inc., Frankenthum, Mich.
Carrier Corp., three awards: Indianapolis Plant, Bryant Div., Indianapolis, Ind.; Monrovia Aviation Co., Syracuse, N. Y.; Spectrol Electronics Co., San Gabriel, Calif.
Celanese Corp. of America, five awards: Chemical Laboratory, Clarkwood, Texas; Chemical Laboratory, Summit, N. J.; Bishop, Tex., Plant; Plastics Plant, Belvidere, N. J.; Rome, Ga., Plant.
Central Illinois Public Service Co., Springfield, Ill.
Central Power & Light Co., Corpus Christi, Tex.
Chicago Bridge & Iron Co., Birmingham, Ala.
Chrysler Corp., two awards: Nine Mile Plant, Detroit, Mich.; Stamping Div., Vernor North Plant, Detroit, Mich.
Cincinnati Gas & Electric Co., Cincinnati, Ohio
Citizens Gas & Coke Utility, Indianapolis, Ind.
City Products Corp., Chicago, Ill.
City Utilities of Springfield, Gas Dept., Springfield, Mo.
Columbus McKinnon Chain Corp., Tonawanda, N. Y.
Commercial Controls Corp., Electro-mode Div., Rochester, N. Y.
Consumers Public Power Districts, Combined Operations, Columbus, Neb.
Container Corp. of America, three awards: Anderson, Ind. Plant; Folding Carton Div., Fort Worth, Tex.; Santa Clara, Calif., Plant.

Continental Baking Co., Hammond, Ind.
Continental Can Co., Inc., Plant No. 16, Baltimore, Md.
Continental-Diamond Fibre Corp., Newark, Del., Plant.
Copperweld Steel Co., Warren, Ohio
Curtiss-Wright Corp., Propeller Div., Caldwell, N. J.
Dana Corp., Spicer Mfg. Div., Pottstown, Pa.
Deere and Co., John Deere Tractor Works, Dubuque, Iowa.
Denver & Rio Grande Western Railroad Co., Grand Junction, Colo., Div.
Dictaphone Corp., Bridgeport, Conn.
Diebold, Inc., Canton, Ohio.
Dierks Forests, Inc., Wright City, Okla., Plant.
Dow Chemical Co., four awards: Allyns Point Div., Gales Ferry, Conn; Ludington, Mich., Div.; Midland, Mich., Plant; Rocky Flats, Colo., Plant.
Dravo Corp., Engineering Works Div., Pittsburgh, Pa.
Duke Power Co., Electric Operations, Charlotte, N. C.
E. I. du Pont de Nemours & Co., 30 awards: Barksdale, Wis., Works; Carothers Research Laboratory, Henry Clay, Del.; Chestnut Run, Del., Construction; Chicago Plant; Columbia, Tenn., Plant; Cleveland, Ohio, Works; Dacron Research Laboratory, Wilmington, Del.; East Chicago Chemical Plant, East Chicago, Ind.; East Chicago Works, East Chicago, Ind.; Experimental Station Construction, Henry Clay, Del.; Everett, Mass., Plant; Fairfield, Conn., Plant; Flint, Mich., Plant; Grasselli, N. J., Works; Jackson Laboratory, Deepwater Point, N. J.; Perth Amboy, N. J., Plant; Pioneering Laboratory, Henry Clay, Del.; Polychemicals Research Laboratory, Henry Clay, Del.; Potomac River, W. Va., Works; Printing Plant, Philadelphia, Pa.; Rayon Research Laboratory, Richmond, Va.; Sabine River Construction, Orange, Tex.; Seneca, Ill., Works; Stine Laboratory, Newark, Del.; Victoria, Tex., Plant; Washington Works, Parkersburg, W. Va.; Waynesboro Construction; Wilmington, Del., Shops; Wyandotte, Mich., Plant; Yerkes Spinneret Unit, Wilmington, Del.

HONORING COLONEL TUBBS



LT. GEN. EMMETT O'DONNELL, JR., (left) Deputy Chief of Staff, Personnel, USAF, presents the Exceptional Civilian Service Award to Col. Will L. Tubbs, USAF, (Retired). The citation reads as follows: "In recognition of his exceptional performance of duties as Assistant for Ground Safety, Headquarters USAF, from 1 June 1956 to 31 May 1957. The Air Force manpower and materiel resources conserved through the effectiveness of the Ground Safety Program have received much national recognition. The capability of Mr. Tubbs in directing the USAF Ground Safety Program to a position of prominence and leadership in the field of accident prevention has distinguished the United States Air Force as well as himself."

National Safety News, June, 1958

FACE SHIELD

4 different styles... 18 different visor types solve every face protection problem. Foam rubber replaceable snap-in sweatbands. All plastic headframes mold to any shape.

EYE & FACE PROTECTION

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SECUREYE PLASTIC EYESHIELD

Lightweight, low-cost large-area protection... 180° vision. Replaceable sweatband—perfectly comfortable. Non-shattering Lumarith protects eyes, upper face, temples.

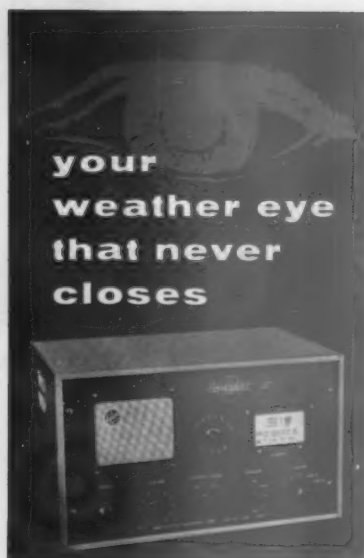
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STOPS
Accidents

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Whenever a bulletin is to be broadcast, a pre-broadcast signal simultaneously turns on the set's speaker and alerts the listener with an audible or visual alarm. Then the bulletin is broadcast. Everyone equipped with a Conalert II can now get emergency weather alerts just as soon as the U.S. Weather Bureau has them.

The FCC has authorized the use of present Conelrad Monitors in this new system of Emergency Weather Warning. For the full story, see the Kaar Conalert II monitor on display in the FCC and U.S. Weather Bureau buildings in Washington, D.C., or fill in the coupon below.



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☐ Send me the complete story on the FCC's new Emergency Weather Warning System, and complete specifications on the Kaar Conalert II monitor.

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Title _____
Address _____
City _____ State _____

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Eastman Kodak Co., Rochester, N. Y., Plants.

Esterbrook Pen Co., Camden, N. J.

Ethicon, Inc., Somerville, N. J., Plant.

Evanston Bus Co., Evanston, Ill.

Falls Paper & Power Co., Oconto Falls, Wis.

Farley & Loetscher Mfg. Co., Dubuque, Iowa.

Fibreboard Products, Inc., Portland, Ore., Div.

Firestone Tire & Rubber Co., seven awards: Entire Company, Akron, Ohio; Brentford, England; Buenos Aires, Argentina, Plant; Mechanical Shop, Akron, Ohio; Memphis, Tenn., Plant; Noblesville, Ind., Plant; Reclaim Rubber Plant, Akron, Ohio.

Food Machinery & Chemical Corp., two awards: Canning Machinery Div., and offices, San Jose, Calif.

Ford Motor Co., seven awards: Blast Furnaces & Coke Ovens, Dearborn, Mich.; Chicago Assembly Plant; Cleveland, Ohio, Foundry; Engineering Staff, Dearborn, Mich.; Livonia, Mich., Plant; Memphis, Tenn., Assembly Plant; Open Hearth & Electric Furnace Div., Dearborn, Mich.

General Aniline & Film Corp., two awards: Ansco Div., Film and Paper, Binghamton, N. J.; Rensselaer, N. Y.

General Cigar Co., two awards: Huntington, W. Va., Machine Cigar Mfg., Plant; Mt. Carmel, Pa., Plant.

General Dynamics Corp., Convair Div., Fort Worth, Tex.

General Electric Co., five awards: East Boston, Mass., Lamp Works; Industrial Heating Dept., Shelbyville, Ind.; Memphis, Tenn., Lamp Works; Meter Dept., Somersworth, N. H.; Schenectady Rels. & Util. Dept., Schenectady, N. Y.

B. F. Goodrich Tire Co., Akron, Ohio, Tire Plant.

Goodyear Tire & Rubber Co., eight awards: Australia, Plant; Gadsden, Ala., Plant; Goodyear Aircraft Corp., Akron, Ohio; Jackson, Mich., Plant; Java, Indonesia, Plant; Rubber Reserve Corp., Akron, Ohio; Wolverhampton, England, Plant; World Wide Operation.

Graniteville Co., two awards: Graniteville, S. C.; Warren Div., Warrenville, S. C.

Graver Tank & Mfg. Co., Inc., East Chicago, Ill.

Great Lakes Steel Corp., two awards: Great Lakes Steel Div., Ecorse, Mich.; Michigan Steel Div., Ecorse, Mich. Grinnell Corp., Providence, R. I., Plant. Gulf States Utilities Co., Beaumont, Tex.

Theo. Hamm Brewing Co., St. Paul, Minn.

Hanna Engineering Works, Chicago, Ill. Harbison-Walker Refractories Co., Bessemer Works.

H. M. Harper Co., Morton Grove, Ill. Harrisburg Railways Co., Harrisburg, Pa.

H. J. Heinz Co., Medina, N. Y. Edward Hines Lumber Co., Chicago.

Holly Sugar Corp., Sidney, Mont. Hoover Co., North Canton, Ohio.

Hughes Tool Co., Houston, Tex. Humble Oil & Refining Co., three

For the smaller washroom

BRADLEY

Duo Washfountains



Foot-Control of water from sprayhead eliminates faucets.

Space for two means more facilities in less space.

SPRAYHEAD

SELF-FLUSHING LARGE BOWL

FOOT-CONTROL

• There are no faucets to manipulate or maintain. No chance of infectious contacts. The Health Dept. of an Eastern city now requires foot-controlled washing facilities in rest-rooms of establishments where food products are handled as in meat and food markets, restaurants, cafeterias, etc. . . Bradley Duo-Washfountains are available in stainless steel and vitreous enamel, described in Bulletin K-1204. Copy mailed on request. BRADLEY WASHFOUNTAIN CO., 2237 W. Michigan St., Milwaukee 1, Wisconsin.

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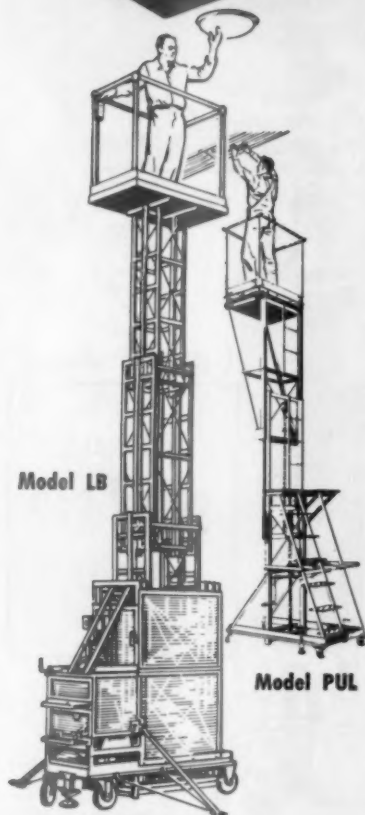
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Duo Washfountains

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National Safety News, June, 1958

90% of overhead servicing can be done faster and safer with these **ECONOMY Hi-Reach Telescopers!**



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Model LB
Hi-Reach Telescopers
Four heights 20 ft. to 35 ft.
Standard Models from \$1510.00 up.

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Three Standard Models

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Rubber tired wheels \$10.00 extra
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Custom built Hi-Reach Telescopers up to 100 ft. Write for complete catalogue. Economy Engineering Co., 4518 W. Lake St., Chicago 24, Ill., 342 Madison Ave., New York 17, N.Y.

ECONOMY
ENGINEERING

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National Safety News, June, 1958

awards: Houston, Tex., Plant; Producing Dept., Houston, Tex.; Refining Dept., Houston, Tex.
Illinois Central Railroad, Stores Dept., Chicago.
Illinois Electric Porcelain Co., Macomb, Ill.
Imperial Sugar Co., Sugar Land, Tex.
Indianapolis Transit System, Inc., Indianapolis, Ind.
Industrial Products Co., Philadelphia, Pa.
Industrial Rayon Corp., Painesville, Ohio, Plant.
Inland Steel Co., East Chicago, Ind.
Interlake Iron Corp., Globe Plant, Jackson, Ohio.
International Harvester Co., two awards: Manufacturing Research, Chicago; Milwaukee, Wis., Works.
International Latex Corp., Dover, Del.
Johns Manville Corp., Jarratt, Va., Plant.
John Strange Paper Co., Menasha, Wis.
Jersey Central Power & Light Co., Asbury Park, N. J.
Jones & Laughlin Steel Corp., Toledo Container Div., Toledo, Ohio.
Kaiser Aluminum & Chemical Corp., three awards: Central California Research, Permanente, Calif.; Newark, Ohio, Plant; Spokane, Wash., Plant.
Kaiser Gypsum Co., Inc., Insulating Products Div., St. Helens, Ore.
Kaiser Steel Corp., Fontana, Calif.
Kellogg Co., Battle Creek, Mich., Plant.
Kellogg Switchboard & Supply Co., Chicago.
Kennecott Copper Corp., Chino Mines Div., Hurley, N. Mex.
Ketchikan Pulp Co., Ketchikan, Alaska.
Kimberly Clark Corp., three awards: Kimberly, Wis., Mill; Technical Research Laboratory, Neenah, Wis.; Staff Eng. Dept., Neenah, Wis.
Koppers Co., Inc., Williams Plant, Port Arthur, Tex.
Koss Construction Co., Des Moines, Iowa.
Lakeside Packing Co., Manitowoc, Wis.
E. J. Lavino & Co., Plymouth Meeting Plant, Norristown, Pa.
A. C. Lawrence Leather Co., Newport, Tenn.
Lebanon Steel Foundry, Lebanon, Pa.
Leslie Co., Lyndhurst, N. J.
Libby, McNeill & Libby, Walla Walla, Wash.
Liberty Powder Defense Corp., Wabash River Ordnance Works, Newport, Ind.
Lockheed Aircraft Corp., Georgia Div., Marietta, Ga.
Management Services, Inc., Oak Ridge, Tenn.
Marinette Paper Co., Marinette, Wis.
Marquette Cement Mfg. Co., Cement Products Plant, Des Moines, Iowa.
Mason & Hanger Co., Silas Mason Co., Inc., Pantex Ordnance, Amarillo, Tex.
Material Service Corp., two awards: Chicago Quarry; Lockport, Ill., Machine Shop.
The Mead Corp., three awards: Brunswick, Ga., Pulp and Paper Co.; Escanaba, Mich., Paper Co.; Rome, Ga., Kraft Co.
Mennonite Publishing House, Scottsdale, Pa.

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PROTECTION
AGAINST**



PENETRATION



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GENTEX SAFETY HAT

gives you **LIGHTWEIGHT COMFORT**
WITH NO SACRIFICE OF PROTECTION.

It far exceeds all Federal safety specifications — including penetration resistance offered by no other lightweight hat — yet weighs within ¾ ounce of any hat made!

All-shift, every-shift protection with:

- Permanent no-wrinkle headband
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- Snap-in sling and headband with fingertip adjustment
- Handsomely styled for steady wear in green, gray, white, yellow, blue.

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Send today for a test hat and full specifications. Ask about our lightweight, washable winter-liners

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your workers
are Safer...**



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8 rivets—2 in front and in back—join each non-slip step to the side rails. Extra bracing and riveting throughout. Rubber feet prevent slipping.



They're non-sparking and stronger!

These rugged ALCO-LITE Ladders are made of industrial type aluminum alloy. They are completely non-sparking and safe to use around highly inflammable materials. They can't rust, rot, splinter or burn. They're so easy to lift and handle, yet are much stronger than any wood ladder. Each step is corrugated for safety and riveted to the side channels with a total of eight rivets. ALCO-LITE Ladders more than meet ASA and Metal Ladders Association standards,



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Merck & Co., Inc., two awards: Pacific Coast Branch, Los Angeles; St. Louis, Mo., Branch.

Merck & Co., Ltd., Valleyfield, Quebec, Plant.

Monsanto Chemical Co., six awards: Industrial Resins, Seattle, Wash.; John F. Queeny Plant, St. Louis, Mo.; Lion Oil Co., El Dorado, Ark.; Lion Oil Co. Refinery, El Dorado, Ark.; Monsanto, Ill., Plant; Plant D, Anniston, Ala.

Moorman Mfg. Co., Quincy, Ill.

C. H. Musselman Co., Biglerville, Pa.

McColl Frontenac Oil Co., Ltd., Central Div., Toronto, Ontario.

McDonnell Aircraft Corp., St. Louis, Mo.

McQuay Norris Mfg. Co., St. Louis, Mo. National Distillers Products Corp., K D & W Plant, Louisville, Ky.

National Gypsum Co., four awards: Bellefonte, Pa., Mine; Kimballton, Va., Quarry; Medicine Lodge, Kans., Mine; Millington, N. J., Plant.

National Malleable & Steel Castings Co., two awards: Melrose Park, Ill., Works; Sharon, Pa., Foundries.

National Sugar Refining Co., Pennsylvania Sugar Div., Philadelphia, Pa.

Nekoosa Edwards Paper Co., two awards: Nekoosa Mill; Port Edwards, Wis., Mill.

New Orleans Public Service Co., Inc., Transit Dept., New Orleans, La.

Northwest Airlines, Inc., Office-Traffic, St. Paul, Minn.

Norton Co., Abrasives Refractories, Worcester, Mass.

Orenda Engines, Ltd., Terminal A, Toronto, Ontario.

Oregon Lumber Co., Planer & Factory, Baker, Ore.

Oscar Mayer & Co., two awards: Chicago Plant; Madison, Wis., Plant.

Oswego Falls Corp., Sealright Co., Kansas City, Kans., Div.

Owens Illinois Glass Co., three awards: Central Mold Shop, Oakland, Calif.; Plant 97, Central Shops, Alton, Ill.; Kimble Glass Div., Warsaw, Ind.

Pacific Power & Light Co., Portland, Ore.

Panama Canal Co., Marine Bureau, Balboa Heights, Canal Zone.

Penn Brass & Copper Co., Erie, Pa.

Penn Controls, Inc., Penn Electric Switch Co., Goshen, Ind.

Pennsylvania Electric Co., Johnstown, Pa.

Peter Kiewit Sons Co., Alaska Operations, Fairbanks, Alaska.

Phelps Dodge Corp., Copper Queen Branch, Bisbee, Ariz.

Philadelphia Electric Co. System, Philadelphia, Pa.

Philco Corp., two awards: Plant 41, Spring City, Philadelphia, Pa.; Rex Mfg. Co., Connerville, Ind.

Pickands Mather & Co., seven awards: Corsica Open Pit Mine, Corsica Iron Co.; Embarrass Open Pit Mine, Lake Mining Co.; Erie Commercial Plant; Erie Preliminary Taconite Plant, Erie Mining Co.; Sagamore Open Pit Mine, Sagamore Ore Mining Co.; Sunday Lake Iron Co., Wakefield, Mich.; Toledo Lakefront Dock Co., Cleveland, Ohio.

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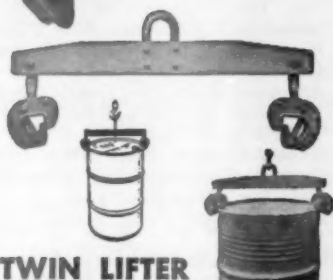
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National Safety News, June, 1958

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National Safety News, June, 1958

H. C. Price Co., Spread 1, Lawrenceburg, Tenn.

Procter & Gamble Co., six awards: Cincinnati Toilet Goods Plant, Ivorydale, Ohio; Ivorydale Food Products Plant, Ivorydale, Ohio; Ivorydale Process Plant, Ivorydale, Ohio; Macon, Ga., Plant; Port Ivory Food Products Plant, Staten Island, N. Y.; St. Bernard, Ohio, Plant.

Quaker Oats Co., two awards: Marion, Ohio, Plant; Memphis, Tenn., Plant.

Quebec Iron and Titanium Corp., Sorel Works, St. Joseph De Sorel, Quebec.

Remington Arms Co., Inc., Ilion, N. Y.

Republic Steel Corp., seven awards: Canton, Ohio, Screen Div.; Cleveland, Ohio, District; Corrigan McKinney Plant, Cleveland, Ohio; Ideal Foundry Div., Newton Falls, Ohio; Pressed Steel Div., Niles, Ohio, Plant; Steel & Tubes Div., Detroit, Mich., Plant. Warren, Ohio, Plant.

Reserve Mining Co., Babbitt, Minn.

Reynolds Metals Co., three awards: Longview, Wash., Plant; North Plant, Richmond, Va.; Troutdale, Ore., Plant.

Ralston Purina Co., Feed Mfg. Plant, Charlotte, N. C.

Rohm & Haas Co., Houston Plant, Pasadena, Tex.

Royal McBee Corp., Hartford, Conn.

Schenley Industries, Inc., two awards: Chess & Wymond, Louisville, Ky.; Geo. T. Stagg Co., Lebanon, Ky.

Sharon Steel Corp., Fairmont, W. Va., Works.

Shell Chemical Corp., Houston, Tex., Plant.

Sheller Mfg. Corp., Dryden Rubber Div., Chicago.

Shenango Furnace Co., Sharpsville, Pa. Simplex Wire & Cable Co., Cambridge, Mass.

SKF Industries, Inc., Altoona, Pa., Plant.

A. O. Smith Corp., Milwaukee, Wis.

Ralph L. Smith Lumber Co., Anderson, Calif.

Sperry Rand Corp., Remington Rand Div., two awards: Marietta, Ohio, Plant; Shreveport, La., Plant.

Splicewood Corp., Ashland, Wis.

Standard Lime & Cement Co., two awards: Kimballton, Va., Plant; Millville, W. Va., Plant.

Standard Oil Co., two awards: Casper, Wyo., Refinery; Sugar Creek, Mo., Refinery.

Stauffer Chemical Co., three awards: Dominique Plant, Los Angeles; Montrose Chemical Corp., Los Angeles; Vernon Plant, Los Angeles.

Stearns Roger Mfg. Co., Denver, Colo. St. Lawrence Corp., Ltd., Red Rock, Ontario.

Stockham Valves & Fittings Co., Birmingham, Ala.

Stone Container Corp., Chicago.

St. Regis Paper Co., Kraft Center Bag Plant, Pensacola, Fla.

The Stroh Brewery Co., Detroit, Mich. Sun Oil Co., Research & Development Dept., Marcus Hook, Pa.

Sunray Mid Continent Oil Co., Tri-State District, Shreveport, La.

Sylvania Electric Products, Inc., seven awards: Equipment Development Plant, Emporium, Pa.; Home Elec-



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tronics Div., Batavia, N. Y.; Final Shipping Warehouse, Williamsport, Pa.; General Offices, Emporium, Pa.; Lighting Div., Winchester, Ky.; Mechanical Development, Salem, Mass.; Shawnee, Okla., Plant.

Talon, Inc., Stanley, N. C.

Chas. Taylor Sons Co., Refractories, Cincinnati, Ohio.

Teletype Corp., Chicago.

Tennessee Valley Authority, three awards: Chemical Engineering, Wilson Dam, Alabama, and Columbia; John Sevier Plant, Rogersville, Tenn.; Widows Creek Plant, Stevenson, Ala.

Texas Eastern Transmission Corp., Products Div., Shreveport, La.

Texas Foundries, Inc., Lufkin, Tex.

Texas State Highway Dept., Austin, Tex.

Thilmany Pulp and Paper Co., Bag Mill, Kaukauna, Wis.

Tidewater Oil Co., Exploration Dept., San Francisco.

Union Carbide Corp., 14 awards: General Offices, Chicago; Electro Metallurgical Co., Ashtabula, Ohio; Haynes Stellite Co., Alexandria, Ind.; Plant; National Carbon Co., Asheboro, N. C.; National Carbon Co., Bennington, Vt.; National Carbon Co., Cleveland, Ohio; National Carbon Co., Read Oak, Iowa; National Plant, Niagara Falls, N. Y.; Oak Ridge Gaseous Diffusion Plant, Oak Ridge, Tenn.; Oak Ridge National Laboratory, Oak Ridge, Tenn.,

Linde Co. Div. of Union Carbide Corp. Construction & Design, Tonawanda, N. Y.; Development Laboratory, Newark, N. J.; Chicago Warehouse; Purox Factory, Los Angeles.

Union Carbide Nuclear Co., Y-12 Plant, Oak Ridge, Tenn.

United States Rubber Co., four awards: Dominion Rubber Co., Ltd., St. Jerome, Quebec; Gilmar Plant, Philadelphia, Pa.; Naugatuck Chemical, Painesville, Ohio; Papineau Factory, Montreal, Quebec.

U. S. Gypsum Co., two awards: Lime Manufacture, New Braunfels, Tex.; New Brighton Plant, Staten Island, N. Y.

United States Steel Corp., nine awards: Columbia-Geneva Div., Pittsburgh, Calif.; Works; Fairfield, Ala., Coke & Coal Chemical Works; Fairfield, Ala., Sheet Mill; Fairfield, Ala., Tin Mill; United States Steel Lead Refinery, Inc., East Chicago, Ind.; Michigan Limestone & Chemical Co., Calcite Plant, Rogers City, Mich.; Tennessee Coal & Iron Div., Concord Coal Mine; American Bridge Div., Erecting Dept., Pittsburgh, Pa.; Oil Well Supply Div., Witte Engine Works, Tex.

Universal-Cyclops Steel Corp., two awards: Bridgeville, Pa., Plant; Cyclops Div., Titusville, Pa.

Valley Dolomite Corp., Bonne Terre, Mo.

Virginia Carolina Chemical Corp., Phosphate Rock Mining, Nichols, Fla.

Vitro Uranium Co., Salt Lake City, Utah.

Western Electric Co., Inc., seven awards: Boston, Mass., Distributing House; Pittsburgh, Pa., Distributing House; Communication Equipment Plant, Indianapolis, Ind.; Jacksonville, Fla., Distribution House; Nashville, Tenn., Distributing House; New Haven, Conn., Distributing House; Omaha Area of Telephone Sales Div., Omaha, Neb.

Westinghouse Air Brake Co., Wilmerding, Pa.

Westinghouse Electric Corp., 10 awards: Atlanta, Ga., Mfg. & Repair; Commercial Atomic Power, Pittsburgh, Pa.; Gearing Div., Nuttall Works, Pittsburgh, Pa.; General Services, Baltimore, Md.; Irwin, Pa., Works; Lamp Div., Bloomfield, N. J., Works; Lamp Div., Richmond, Ky.; Manufacturing & Repair, Chicago; Manufacturing & Repair, Philadelphia, Pa.; Small Motor Div., Lima, Ohio.

West Point Mfg. Co., Fairfax Mill.

Weyerhaeuser Timber Co., six awards: Clemons Logging, Cosmopolis, Wash.; Lumbering, Longview, Wash.; Plywood, Longview, Wash.; Sawmill, Coos Bay, Ore.; Springfield, Ore., Plywood Div.; Tacoma, Wash., Office.

Wheeling Steel Corp., Expanded Metal Products, Beech Bottom, W. Va.

Whitehall Cement Mfg. Co., Cementon, Pa.

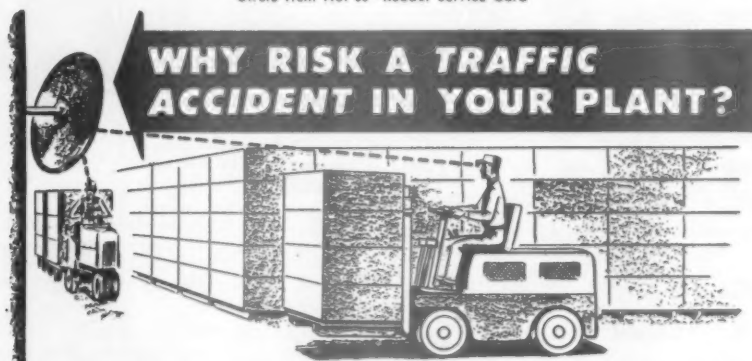
Wilson Paper Box Co., Inc., Richmond, Va.

Wise Potato Chip Co., Berwick, Pa.

Wood Conversion Co., Cloquet, Minn.

Woodward Iron Co., Coal By-Products Plant, Woodward, Ala.

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Circular Convex Glass	300M.R.	30" dia.
Circular Convex Glass	360M.R.	36" dia.
Flat Glass Rectangular	918	9'x18"
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M.R. indicates metal rim.

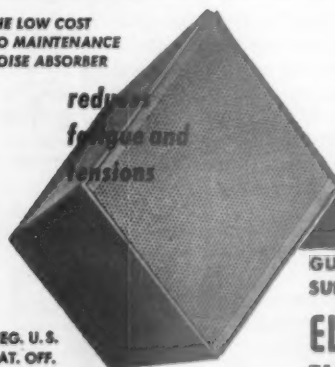
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Circle Item No. 84—Reader Service Card

Learn More About Smog But No Cure Yet

New knowledge of the chemistry of smog, plus new mechanical devices for controlling automobile exhaust gases, may be used to cut air pollution in metropolitan centers, according to W. L. Faith, managing director of the Air Pollution Foundation, San Marino, Calif., at the recent Annual Meeting of The American Society of Mechanical Engineers in New York.

Experts now agree, said Mr. Faith, that two groups of ingredients in exhaust gas are the villains of much smog. When exposed to sunlight, they react with each other to produce eye-burning, sky-filling smog.

The two ingredients, unburned hydrocarbons and oxides of nitrogen, are only a small percentage of all automobile exhaust, but when 6,000,000 gallons of gasoline are burned each day, as in Los Angeles, producing 60 billion cu. ft. of exhaust, enough are generated to fill the atmosphere.

Since both ingredients are necessary to form smog, the obvious way to solve the problem is to eliminate one or the other. To date, most work has been aimed at reducing the hydrocarbons, either by burning them more completely in the engine or by removing them from the exhaust.

Approaches to more complete burning include several mechanical devices that control the flow of gasoline and air more precisely. In addition, attempts have been made to use liquid or solid filters that would remove unwanted gases from the exhaust system, or to work out a system of burning them after they leave the engine but before they enter the atmosphere.

Some progress has been made, but no really satisfactory system has yet been found.

On the second branch of the problem, reducing the oxides of nitrogen, little work has been done. An attempt has been made to use activated carbon as a catalyst that would cause the nitric oxide to break down into nitrogen and carbon dioxide, but the catalyst itself is burned by the hot gases. Another proposal, to

inject quantities of water into the engine cylinders, thereby cutting formation of nitric oxides, has not yet been proved feasible.

"At this stage of development," concluded Mr. Faith, "no proposed solution to the auto exhaust problem can be completely discarded, but indications are that burning exhaust hydrocarbons after they leave the engine, or removal of nitric oxide in the exhaust system are the best bets."

How Winds Affect Air Pollution

This article has been condensed from Bulletin No. 5, issued by the Public Information and Education Division, Air Pollution Control District, Los Angeles.

WINDMILLS AND SAILS have given way to fuels and electricity as power sources, but winds are still important to modern indus-

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Featherlight TUC-AWAYS

A new thick plastic frame gives greater utility and longer life to TUC-AWAYS, the safety spectacle that's so light and comfortable that workers hardly know they're wearing them.

Interchangeable, optically correct EYE SAVERS Lenses are safe and shatter-proof. They snap-in and snap-out for easy lens replacement.

Plastic or Metal Retrax temples telescope in and out for perfect fit — can be adjusted by the wearer.

For details, see your authorized EYE SAVERS supplier or write direct.

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Write for the Babcock Industrial Ladder Folder, describing other Extension Ladders, Single Ladders and Step Ladders.

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Plus the fact that these crisp, clean AJAX Cups provide the most convenient, comfortable drinking water service, boost employee morale, and reduce the hazard of transmitted infections.



AJAX® CUPS — wedge-shaped, easy to hold, dispense open, ready to drink from; in 4, 6 and 7 oz. sizes, imprinted with assorted stock safety messages at no extra cost—or your own message to order.

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Circle Item No. 87—Reader Service Card

trial economy. They carry away millions of tons of smoke, ash, fumes, and gases produced every day by human activity.

In many areas, including the Los Angeles Basin, winds are weak, and sometimes non-existent. Aerial wastes, normally dispersed into the sky, stagnate in a limited volume of air until the eye-irritating haze called smog develops.

The strength of winds determines three important elements of the smog problem:

1. How fast pollution is carried away.
2. Where it goes.
3. Whether it becomes a problem of local or of general nature.

Measurements of Los Angeles Basin winds have shown that on approximately 70 days of each year, they are of insufficient strength to remove the normal accumulation of aerial "garbage" emitted by industrial and domestic processes. On those days, pollution accumulates slowly over the entire Basin.

Important in the formation of smog is the temperature inversion, a condition where, at various elevations, the air temperature increases with height rather than decreases. This prevents cooler polluted air from dispersing upward.

When the warmer layer descends to within about 1500 ft. of the ground, pollution is trapped and becomes smog.

There are now 65 wind measurement stations throughout the County at which wind movements and velocities are measured. Using data obtained from instruments, District meteorologists have mapped invisible "highways of the sky" which carry smoke, dust, gas and fume pollutants to every corner of the Basin.

Readings from the present network of 65 wind measuring stations, 23 of which are owned by the District and the rest by the military, weather bureau and private industry and research groups, are forwarded to the District regularly for hour-by-hour mapping.

Through a technique of putting "tracer" chemicals in wind patterns, meteorologists have been able to determine the paths of

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Circle Item No. 88—Reader Service Card
National Safety News, June, 1958



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NON-SKID STEPS

Frame work made from heavy gauge 1" diameter round steel furniture tubing, with all joints electrically welded. Mounted on Swivel Brake Casters which allow the ladder to be rolled freely when no one is on it. When you step on the ladder the rubber cushioned legs rest on the floor and prevent rolling.

Made in 13 heights—from 12" 1 Step to 117" 13 Step, and in 4 widths—18", 20", 26" and 32", with and without hand and platform rails.

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123 W. Spring Ave. Naperville, Ill.

Circle Item No. 90—Reader Service Card

National Safety News, June, 1958

winds not only at ground level, but at higher elevations.

The maps provide smog "detectives" with clues to pollution sources. Finding serious air contaminants in a region, experts backtrack on a wind chart to pinpoint the source and crack down on the offending plant or operation.

During August 1953, an intensive study was made of air movements. It was learned that:

1. Irritating smog in the central Los Angeles area can be traced to the morning traffic rush hours, confirming suspicions that the auto exhaust is the principal smog source in that area.

2. Normally, eye irritation is produced by a one-day accumulation of pollution, indicating that a build-up of smog intensity to potentially hazardous concentrations is highly unlikely.

Data collected from wind measurement projects has revealed a number of other enlightening facts, among which are:

1. Air pollution produced in one area generally follows a definite path as it moves to another area. For instance, smog produced in the southern Los Angeles area (where most of the oil refineries are located) very rarely is blown into the central Los Angeles area, where the major offender is the auto exhaust.

2. Smog begins to occur when the temperature inversion level drops to 1500 feet or less and wind speed is below three miles per hour.

3. Wind speeds in the Basin average only 5.1 miles per hour, as compared to 8.0 for Chicago and 11.0 for New York.

4. The mountains surrounding the



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Circle Item No. 91—Reader Service Card

Basin have no bearing on the smog problem. If they were removed, smog levels would remain the same.

5. Power necessary to move the smog out of the Basin with fans or other artificial means would require more power than is produced by Hoover Dam in 3½ days.

Of equal importance to wind movements from the air pollution viewpoint is information about the inversion level. At present,

information on height, temperature, humidity and pressure of the Basin's atmosphere is obtained from a joint Army-U.S. Weather Bureau station at Santa Monica. Future plans for the District include establishment of a program for measuring the "character" of the atmosphere from other areas.

Meteorologists also measure the amount and intensity of sun-

light each day to relate sunlight to smog formation.

Micrometeorological studies, or the study of weather in small areas, is being conducted in specific segments of the county to develop techniques to be used in preventive air pollution zoning programs.

Data from this study will be used to zone certain areas of the county to industries whose emissions can be emitted to the atmosphere without creating a nuisance or hazard to other industries or residential areas in the wind path of the industry.

Certain industries with large uncontrollable emissions, such as steam power plants, have been denied permission to construct in the Los Angeles Basin. Others are urged to locate elsewhere, if emissions are objectionable.

PERSONALS

News of people in safety and related activities

RAYMOND H. GREEN has been named director of personnel and public relations for The New Haven Trap Rock Company, New Haven, Conn.

Mr. Green joined New Haven Trap Rock in May 1951. Before his present advancement he was safety engineer for all company operations throughout Connecticut, and in this capacity supervised general safety and blasting operations at plants in North Branford, Plainville, and Wallingford.

Active in community affairs, Mr. Green also serves as secretary of the executive committee of the Cement, Quarry, and Mineral Aggregates Section of the National Safety Council, and secretary of the Eastern New York Mineral Aggregates Safety Council. He was formerly assistant secretary of the Connecticut Society of Civil Engineers and is a member of the Connecticut Safety Society.

A native of New Britain where

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Complete details of construction and performance, which are far beyond ordinary life preserver vests, are described in our Quick Release Life Preserver Vest Bulletin. Write for your copy today.



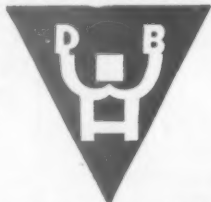
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BURNY BROS. BAKERY, CHICAGO



Garage and stockroom floors in Burny Bros. large, modern bakery get daily scrubbing with a Job-Fitted Combination Scrubber-Vac and Setol Cleanser

THEY'RE an unbeatable team to speed the cleaning of oily, greasy floors. *Here's why:* A *Scrubber-Vac* completely mechanizes scrubbing. It applies the cleanser, scrubs, flushes if required, and picks up (damp-dries the floor) — *all in one operation!* Job-fitted to specific needs, a *Scrubber-Vac* provides the maximum brush coverage consistent with the area and arrangement of the floors. Its teammate, *Setol Cleanser*, is specially designed for the greater speed of *combination-machine-scrubbing* ... emulsifies grimy oil and grease *instantaneously* for fast, thorough removal by the machine's powerful vac. Moreover, *Setol* retains its strength longer than average alkaline cleansers. This, too, speeds the cleaning process ... saves on materials ... and cuts operating time of the machine, which in turn reduces

labor costs. The *Scrubber-Vac* shown above is *Finnell's 213P*, for heavy duty scrubbing of large-area floors. It's *self-propelled*, and has a 26-inch brush spread. Cleans up to 8,750 sq. ft. per hour (and more in some cases), depending upon condition of the floors, congestion, et cetera. (The machine can be leased or purchased.) *Finnell* makes a full range of sizes, and *self-powered* as well as *electric* models ... also a full line of fast-acting cleansers. In fact, *Finnell makes everything for floor care!* Find out what you would save with *combination-machine-scrubbing*. For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or *Finnell System, Inc.*, 2206 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.

Originators of Power Scrubbing and Polishing Machines



**BRANCHES
IN ALL
PRINCIPAL
CITIES**

New

SAFETY EQUIPMENT

Product announcements in this section are reviewed for compliance with the advertising policy of the NATIONAL SAFETY NEWS. Inclusion should not, however, be construed as endorsement or approval by the National Safety Council.



Hard Hat Suspension

The "fixed crown" consists of a dual suspension within the Skullgard safety hat.

One suspension, which is permanent, assures the wearer of at least 1¼-in. for safety clearance while the other can be adjusted for the wearer's comfort.

The suspension offers six major features: fixed crown clearance; easily inserted and removed locked-in liner; elimination of pressure points; air cushion effect; extreme ease of size adjustment and plastic composition for cleanliness and long wear.

Both the Skullgard shell and the new suspension are available in three sizes: extra small, standard, and extra large. The standard size will fit about 95 per cent of wearers.

Mine Safety Appliances Co., 201 N. Braddock St., Pittsburgh, Pa. (Item 301)



Desk Size Lens Cleaner Dispenser

This desk size box of K-Lens-M Lens Tissue is designed for offices and plants. The 200 tissues

are inter-folded and feed one at a time. The tissue is lint-free, long-fibred, absorbent, and strong.

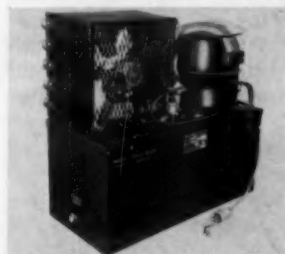
Used with lens cleaner, the tissues can be used to clean all types of personal and protective eyewear, both glass and plastic. They are said to leave no film, haze, or streaks.

Wilkins Co., Inc., Courtland 44, N. Y. (Item 302)

Safe-T-Tread Runner

This rubber flexi-floor runner can be laid over or incorporated in flooring installations. There are two weights—medium for regular use and heavy for commercial traffic. The corrugated ¼-in. rib surface is safety cushioned to help prevent accidents and is pre-trimmed to a 36-in. width. A variety of colors are available for specific floor requirements in corridors, ramps, stairways, and landings in office buildings, schools, and public buildings.

The R.C.A. Rubber Co., Akron 5, Ohio (Item 303)



Package Refrigeration Unit

Where space saving is a factor, this unit should be valuable. It

can be placed in a wall recess, under counters, on shelves or in cupboards, and connected to any type of the manufacturer's drinking fountain at a remote location. A removable access and ventilation panel is provided for wall recess installation.

The unit comes in three sizes.

Halsey W. Taylor Co., Warren, Ohio (Item 304)

Skin Cream Ingredient

A corrosion-resistant ingredient, developed to prevent spotting of highly finished metal surfaces by workers' perspiration or finger-prints is now a part of skin protective lotions.

The anti-corrosion factor is dispersed in a water-soluble plastic film which is deposited on the skin by evaporation of the manufacturer's Ply No. 9 liquid.

As the worker perspires, his perspiration carries with it a portion of the corrosion-retardant from

For More Information—Circle Item Number on Reader Service Postcard

the water-soluble film. This is said to counteract the salts, acids, and moisture of the perspiration and prevents spotting or corroding of the metal surface.

The ingredient was developed to meet problems encountered in machining and inspection operations on delicate metal parts such as bearings; aircraft instruments, and electronic parts; parts for plating, etc.

The continuous, flexible plastic film which is deposited on the skin by evaporation of Ply No. 9 barrier liquid is impervious to kerosenes, petroleum-type cutting oils and solvents, and to most common hazards met in machining and inspection of metal parts.

Milburn Co., 3246 E. Woodbridge, Detroit 7, Mich. (Item 305)



First Aid Plastic Packaging

Unit-type first-aid packs are now wrapped in poly-

ethylene to protect them from moisture, chemicals, grease, and dust.

One big problem with unit kits, so important for immediate use to men needing first-aid treatment, has been that cardboard absorbs moisture, causing it to deteriorate. Humidity, fog, dew, rain, and snow contribute to this problem. Polyethylene gives each unit protection, keeping them dry and clean and protecting them from moisture. Even under water they remain dry.

The polyethylene is clear so the product desired and the directions for use can be easily read. To remove the wrapping, a quick pull of the tabs at one end of each unit is all that is needed. The kits are available in all standard and many special sizes.

E. D. Bullard Co., 2680 Bridgeway, Sausalito, Calif. (Item 306)



Safety Slogan Paper Cups

A series of seven-ounce safety slogan cups fea-

tures "Life Guard Oscar" in a number of illustrated examples of the safety slogans. The cups are printed in two colors and each has two illustrated slogans and a constant reminder "Save A Life—It May Be Your Own."

New slogans include: "Look before you lift; Be wise—protect your eyes; Sleep at home—not on the job; Not so wise—wearing ties; Careless hands? First Aid bands; Not alert? Often hurt."

Continental Can Co., 100 E. 42nd St., New York 17, N. Y. (Item 307)



Multi-Fit Bridge

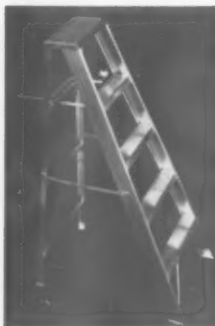
A new line of safety glasses features the Multi-

Fit bridge which is claimed to fit more than 90 per cent of all employees, including male and female. The bridge seats itself automatically. This is meant to provide greater comfort and more fitting versatility than is now obtained with conventional bridges in assorted sizes.

The manufacturer designed the new bridge to be self-adapting, with no involved try-ons or bridge adjusting. Fitting time is reduced, he claims. The design, nose pads and inner bridge surface form a continuous support across the bridge of the nose.

By using the Multi-Fit spectacles, inventories of various size glasses may be drastically cut.

Fendall Co., 4513 N. Lincoln Ave., Chicago 25, Ill. (Item 308)



Aluminum Stepladder

The "Royal Champion" ladder with golden top tray, pail shelf and rivets is another development in the trend to glamorize work tools. The golden trim is meant to make the ladder

acceptable for use in offices or stores. Each ladder will have a protective corrugated-board cover.

Designed for industrial users, the "Royal Champion" complies with the *Code for Metal Ladders* of the ASA by providing 3-in. wide steps, a full 12 in. between steps, true ladder height (4-ft. ladder measures 4 ft. along front side rail) and designed to hold a 200-lb. man with a safety factor of 4.

Louisville Ladder Co., 1011 W. Oak St., Louisville, Ky. (Item 309)



Air Sampling Kit

A simplified air sampling kit that occupies only a cubic foot of space and uses a small can of liquefied gas as its power source in place of a hand-operated pump measures lead concentrations in air.

Although designed specifically for use in gasoline blending plants handling tetraethyl lead, the instru-

ment is expected to have wide safety applications in other industrial areas. Known as the "Uni-Jet" Lead-in-Air Analyzer, the device and analytical equipment are packaged in a carrying case. The air sampling device weighs only 4½ lbs. and includes a charcoal trap, midjet impinger, and the pump or aspirator. The latter is a miniature jet "engine" without moving parts that works on the venturi principle with the power furnished by Du Pont Freon propellant, a non-flammable, non-explosive, virtually non-toxic and odorless liquefied gas.

A carrying case contains comparator tubes, a Hellige comparator instrument and supplies of reagents. The total weight of the air sampler and the analysis kit is 18 lbs.

When the liquefied Freon is permitted to expand into a gas through the aspirator, measured samples of air are drawn into a glass scrubber containing an iodine solution. Lead in the air is absorbed in the iodine solution and retained as various lead iodides. The iodine solution then is exposed to a reagent in the comparator tube and reduced to a colorless iodide which, when shaken with a chloroform solution of dithizone, reacts to form colored complexes. The concentration of lead is determined by comparing this color with a disc of permanent glass color standards in a Hellige comparator.

Glass color standards used in the kit are calibrated to read in micrograms per cubic foot, based on a two-cubic-foot air sample, and lead determinations can be made with an accuracy of plus or minus one microgram of lead per cubic foot.

Union Industrial Equipment Corp., 20 Davis Ave., White Plains, N. Y. (Item 310)



Drum Lifter

One-man operation, lightness, and a 2,000 lb. capacity are features of this drum lifter.

It lifts vertically and stacks old and new drums with a safe grip. It can be attached and removed quickly and used on fork trucks, chain falls, cranes, and hoists. The lifter is all-welded construction and handles 30- and 55-gallon or smaller drums.

Pucel Enterprises, Inc., 3746 Kelley Ave., Cleveland 14, Ohio (Item 311)



Chain Instep Strap

A spring-tension instep chain keeps protective leggings in place. It adds comfort and safety for the industrial

worker and readily adapts to any size shoe and eliminates the nuisance of adjusting conventional instep straps. More importantly, the chain instep strap positively positions the flare on the top of the shoe where it will give maximum protection.

The strap does not hamper the quick release feature of the leggings. This feature is currently being used on conventional knee length (12-in.) leggings, but it can be adapted to spats and hip leggings also.

Wheeler Protective Apparel, Inc., 226 W. Huron St., Chicago, Ill. (Item 312)



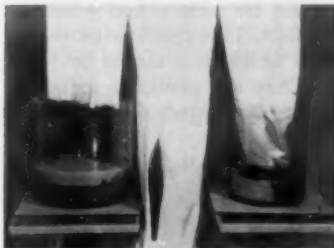
Salt Tablets

"Pep-Up" salt tablets are available with vitamins B1, B2, and C added. The tablets will replace necessary salt in the body and give minimum adult requirements of the three vitamins.

The manufacturer says the tablets offer quick, low-cost insurance for full physical efficiency and a feeling of well-being.

The new tablet is an addition to "Pep-Up" regular impregnated and enteric coated tablets. The tablets with vitamins are available in new 500- or 1,000-size plastic, expendable dispensers that are factory sealed and weatherproof.

United States Safety Service Co., 1535 Walnut St., Kansas City 8, Mo. (Item 313)



Dynel Work Clothing

A new group of acid- and chemical-resistant 100 per cent Dynel fabrics for utility work clothing, featuring new anti-static and silicone finishes, is woven of acrylic fiber. The line includes several weaves and all fabrics are of solution-dyed Dynel yarns to insure color fastness.

Special finishes used on the fabrics include the new "Aston" anti-static finish to protect against the build-up of static electricity. Of chief significance is the inherent strength and chemical resistance of the Dynel fiber. The garments are said to withstand the harmful effects of such chemicals as sulphuric, hydrochloric and chromic acid, sodium hydroxide, alkalis, and salts. In the illustration, both pairs of slacks were lowered into a 70 per cent concentration of sulphuric acid. The Dynel garment was not affected.

Industratex Div., Chrysler Textiles, Inc., 49 W. 37th St., New York, N. Y. (Item 314)

For More Information—Circle Item Number on Reader Service Postcard

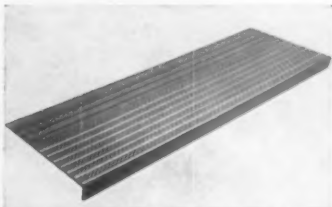


Aluminum Safety Cap

A vertical-taper-ribbed aluminum safety Cap called the "Super-Lite" is lightweight but the design gives maximum impact resistance, the manufacturer says. The construction of the cap is rigid and presents deflection to blows or falling objects. The aluminum shell is designed to reflect heat.

The suspension is resilient, shock-absorbing, form-fitting polyethylene. It shapes to the wearer's head for comfort and stays put in any working position. The suspension floats the headband to avoid direct head contact and it is mildew- and fungus-proof, non-toxic and easily sterilized, and adjustable.

Fibre-Metal Products Co., 5th & Tilghman Sts., Chester, Pa. (Item 315)



Safety Stair Treads

Koroseal Stair Treads will withstand grueling

service in any kind of public, commercial, or industrial building. A new method of stair tread manufacture enables the treads to be available in all standard lengths up to 8 ft. with a curved or square nose. They are non-porous with full thickness color and are grease, oil, and abrasion resistant.

The treads are designed for safety and economy with a thickness of 3/16-in. The front edge where wear is heaviest is 1/4-in. thick and tapers to 1/8-in. thick on the back edge. They are available in brown but can be furnished on special quantity orders in green or gray.

R. C. Musson Rubber Co., 10 S. College St., Akron 8, Ohio (Item 316)



Safety Glasses

These new onyx-on-crystal spectacle-type safety glasses utilize frames with new safety features. The patented eye-wire has a specially developed groove which not only holds the lens securely, but is designed to support the lens against being driven backward toward the eye when struck. The lens groove is deeper to accommodate true safety lenses and is engineered to give maximum support of the entire periphery of the lens—if the lens should be broken by un-

usually severe impact, the fragments are held together.

The 2-tone frame is claimed to be dielectric, flame resistant, strong and lightweight. The bridge and frame sizes are clearly marked on each unit. The frame has matching spatula and comfort cable temples and a sturdy key-hole bridge.

They come with permanent wide nose pads and are available with adjustable pads. The glasses have 5-barrel hinges and screws made of corrosion-resistant metal. Three eye sizes, five bridge sizes and six curved "Super Armorplate" lenses or clear Plastolite lenses are available.

American Optical Co., Southbridge, Mass. (Item 317)



Ripple Sole Safety Shoe

This new shoe is a black oxford with a concealed steel toe and a ripple sole. Number 626 is available in a

number of sizes.

The manufacturer says that men on their feet for eight or more hours a day in industrial plants report they find the sole not only reduces foot fatigue, but absorbs the additional strain caused by vibrations from grounded machinery. The interspaces between the corrugations on the sole act as a sort of "air cooling" system for those who work on hot floors. Multiple rubber grips give extra traction on wet or slippery surfaces.

Iron Age Div., H. Childs & Co., Inc., Pittsburgh 12, Pa. (Item 318)



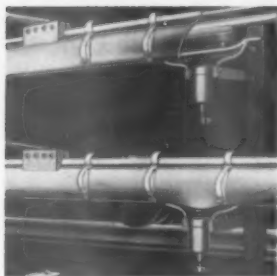
Steel Mesh Gloves

"Meshield" gloves have a soft, comfortable, cotton flannel base with four-ply, stainless steel mesh firmly sewn to the glove. The gloves are flexible but provide protection against sharp or abrasive objects.

"Meshields" may be worn as produced or can be used as a liner glove under any other type work glove. Particularly important to workers in handling sheet steel, castings, and where knives or machetes are used, the gloves are available in gauntlet style with full coverage or breathing backs with palm and finger coverage only.

Surety Rubber Co., Carrollton, Ohio (Item 319)

For More Information—Circle Item Number on Reader Service Postcard



Electrical Trolley System

A new electrical trolley system of radically different design which is said to provide virtually complete safety is a departure from conventional systems in that it will carry high amperages required by heavy-duty cranes and similar equipment. Components include an extruded, hard-drawn copper conductor bus; a sliding collector shoe of self-lubricating alloy copper; and a flexible protective sheath covering both bus and shoe. A Koroseal sheath is used for inside applications, neoprene and nylon for exterior. In crane bridge electrifications the collector shoes can be mounted on a horizontal plane on minimum spacing of 3-in.

This is a copper-to-copper system which maintains total area of contact between conductor and collector. This principle, together with the covering sheath, allows continuous operation despite the presence of dirt, grease, or acid fumes. The system is self-deicing on exterior installations subject to freezing rain or snow. The system is for installations from 110 to 600 volts and collectors are from 70 to 1,125 amperes. Five sizes of conductor bus are available, with electrical capacities from 325 to 4,500 amperes.

U-S Electric Mfg. Co., 1055 Banksville Road, Pittsburgh 16, Pa. (Item 320)



Ladder Lash

The Safe-Hi Ladder Lash provides safe ladder anchoring vertical or horizontal to posts, poles, and similar anchors. The lash is designed to eliminate the uncertainties of hand-tied knots. It can be attached to any ladder by drilling four holes and bolting the ladder lash in place.

The lash is made of parachute webbing of 2,800-lb. tensile strength, with a forged steel snap that locks into the eye bolt on the ladder rail. The workman passes the strap around the anchor and snaps it to the eye bolt. The tab end of the strap is then pulled through the adjustment slide until it is taut. The lash can be placed around anchors up to 16-in. diameter.

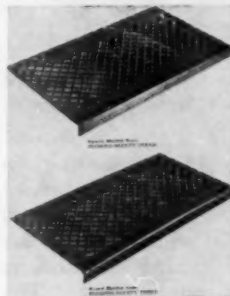
Rose Mfg. Co., Dept. P, 2700 W. Barberry Place, Denver 4, Colo. (Item 321)



Automatic Dockboard

The Hi-Lo Automatic dockboards can be installed in existing truck docks without expensive alterations. Model 1200 is simply bolted to the top of the dock. A new counterweighting system is mounted on the face of the dock between two bumpers. No electrical, air, or hydraulic power is required. The backing truck automatically lowers the ramp to the working position. After loading operations are completed, the ramp automatically returns to its original position, ready to service the next carrier. The entire adjustable ramp section tilts automatically to compensate for uneven truck beds. Standard models are 6-ft. wide, and 8- and 10-ft. long with a roll-over capacity of 12,000 lbs.

Kelley Co., Inc., 2111 West Mill Road, Milwaukee 9, Wis. (Item 322)



Stair Tread

A molded nose is featured in this long-wearing stair tread. The diamond-designed tread is produced of Do-All rubber and cord compound. It is available in either rounded or square nose. Black in color, the treads are 1/4-in. thick and come in widths up to 36-in. The maximum depth is 24-in. with a standard depth of 12-in.

American Mat Corp., 2018 Adams St., Toledo 2, Ohio (Item 323)



Air-Oxygen Entry Mask

A lightweight, air-oxygen, quick entry mask—the "Short Snorter"—gives respiratory protection in any toxic or oxygen-deficient atmosphere for a period of ten to fifteen minutes. For use when entering a toxic atmosphere to inspect, rescue, or perform other duties, the "Short Snorter" mask can be put into operation in seconds. It weighs only fifteen pounds. A full face mask is provided and the demand valve is said to give all the air or oxygen the wearer needs with a minimum of breathing effort.

Globe Industries, Inc., Medical & Hospital Dept., 125 Sunrise Place, Dayton 7, Ohio (Item 324)

For More Information—Circle Item Number on Reader Service Postcard



Sweat Band

The "Sweatt-Ban" is a sponge-like strip of cellulose acetate backed with Pel-

lon fabric plus a rubber headband. The manufacturer claims up to 27 per cent greater evaporating capacity.

The additional cooling effect is afforded through the use of carefully spaced perforations in the spongy material. The product evaporates more moisture because of this air-vent construction and the Pellon backing. As a result, the wearer's forehead is kept cooler aiding in preventing blurred vision and sweat-fogged glasses or goggles.

Dipping the "Sweatt-Ban" in cold water prior to wearing is said to increase its perspiration evaporating qualities.

Sellstrom Mfg. Co., Palatine, Ill. (Item 325)



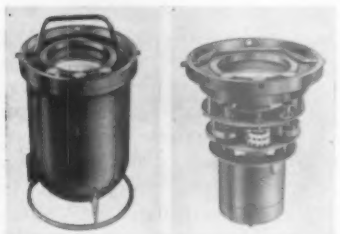
Carriage Return Safety Device

A new safety device for the automatic return of the motor carriage which houses the

saw blade of radial-arm woodworking machines is called the "Spir-Ator" safety return device. The spring-actuated unit increases operator protection from moving parts of the machine by immediately returning the cutting mechanism to a rear position the instant the operator relaxes his forward pull on the carriage.

The "Spir-Ator" is a self-contained unit designed for quick mounting using existing drilled and tapped holes in the motor carriage and radial-arm of Model GA machines.

DeWalt Div., American Machine & Foundry Co., Lancaster, Pa. (Item 326)



Underwater Radiation Detector

An 8¾-lb. portable, underwater gamma radiation survey meter is

designated the Riggs UW-1. The instrument is especially adaptable to radioactivity survey work in underwater salvage operation, demolition work and nuclear waste disposal checkout for radioactivity.

All components are internally housed in a special rugged case designed for submersible operation to

depths of 300 feet for a 24-hour operational period. Adequate hand grips and a combination stand and grasp ring base are provided as part of the outer case construction. The meter scale is conveniently located and marked for fast, clear readability.

Riggs Nucleonics Corp., 717 N. Victory Blvd., Burbank, Calif. (Item 327)



Non-Slip Grating

Non-slip grating tracks that are meant to eliminate traction problems caused by snow, ice, rain, mud, or oil and grease build-up are standard on these new mobile loading ramps. The grating

tracks are heavy-duty open construction for self-cleaning and are recessed in the deck surface to set flush with center flooring. They extend throughout the length of the area of maximum slippage and are designed to provide safe and traction at low speeds.

The ramps are made of magnesium for one-man handling and are available in 58- and 70-in. widths and in 30- and 36-ft. lengths. Capacities range from 11,000 to 16,000 lbs. Other new features include a 4½-in. high curb and one-piece lower truss beam members to eliminate fatigue failures at welded joints.

Magline, Inc., 1900 Mercer St., Pinconning, Mich. (Item 328)



Safety Brake Seat

A safety brake seat is being built into this manufacturer's gas-powered, electric-

drive lift truck. A hinged seat replaces the conventional hand-operated lever as the means of applying the parking brake. The seat is spring-retained in braking position at all times the seat is unoccupied.

The parking brake is located on the armature shaft of the electric-drive motor taking full advantage of torque multiplication through the gear train. This, the maker says, affords maximum braking with a minimum of application pressure. In conjunction, the hinged seat can also operate a pneumatic switch so timed as to open the ignition circuit at any preset time after the operator dismounts.

Automatic Transportation Co., 149 W. 87th St., Chicago 20, Ill. (Item 329)

For More Information—Circle Item Number on Reader Service Postcard



Charles W. Neilson

Bausch & Lomb Optical Co.

Charles W. Neilson has been appointed a safety products representative for this Rochester, N. Y. manufacturer of protective eye equipment and vision testing equipment.

He will work with dealers in Michigan, Northwest Ohio, and Northwest Indiana. He has had over eight years experience selling safety products in the Detroit area.

* * * *

R. D. Werner Co.

The field sales force of this manufacturer of aluminum products has been expanded. Five new district sales managers will represent the complete line of stepladders and extension ladders, sink frames, metal trim, and aluminum stages and planks.

The managers and territories are as follows: G. Patrick Bingham—Michigan and parts of Indiana and Ohio; R. E. Kiely—Illinois, Wisconsin, Minnesota, and Iowa; A. H. Magruder—Arkansas, Louisiana and Mississippi; J. J. Schumaker—Kentucky and parts of Indiana, Ohio, Tennessee, and W. Virginia; Russell C. Wright—the New England states.

* * * *

Turco Products, Inc.



D. T. Buist

A. K. Beard

S. B. Van Dyne

Appointment of three top executives has been announced. Vice-president—marketing is Dan T. Buist, formerly director of sales. Appointed general sales manager is Archie K. Beard who has held various supervisory sales positions with the Los Angeles chemical company over 10 years. Stewart B. Van Dyne has been named assistant to Mr. Buist.

* * * *

Iron Age Safety Shoe Div., H. Childs & Co., Inc.

The new sales representative for the company in Indiana, Northern Kentucky, and part of Illinois is Thomas W. Potter. His home office will be at 124 E. 49th St., Indianapolis, Indiana.

Aluminum Safety Products, Inc.

Donald R. Phillips has been appointed district sales manager for the Houston, Texas territory. He will be in charge of sales for the company's Aldek ladders, stages, and mobile bridge, stairway, and span scaffolds in Texas, New Mexico, Oklahoma, Arkansas, and Louisiana.

Mr. Phillips has wide experience in both retail and wholesale merchandising.

* * * *

Gro-Cord Rubber Co.



R. E. Traver



G. W. Burk

The John G. Traver Co., Philadelphia, has been appointed sales representative for the Gro-Cord line of work and safety shoe soles and heels. They will represent the company in Pennsylvania, Maryland, and Virginia. Richard E. Traver is president and Glenn W. Burk is vice-president.

* * * *

American Optical Co.

The sunglass and safety products functions will no longer be combined as the Safety-Sunglass Div. The safety business will be a separate unit designated as the Safety Division.

The move centers the safety business under Charles H. Gallaway as vice president and general manager of the safety division. He headed the former Safety-Sunglass Division as vice president and general manager.

* * * *

General Bandages, Inc.



This manufacturer of Gauztex bandages has moved to a newly constructed plant at 8300 Lehigh Ave. in Morton Grove, Ill, a suburb of Chicago.

HELP US KEEP THE THINGS WORTH KEEPING

Gently, he starts her on another adventure in a wonder-filled world.

Will her world always be so peaceful, so free? You can help it be—by helping to keep the peace.

But peace costs money. Money for strength to keep the peace. Money for science and education to help make peace lasting. And money saved by individuals.

Your Savings Bonds, as a direct investment in your country, make you a Partner in strengthening America's Peace Power.

The chart below shows how the Bonds you buy will earn money for you. But the most important thing they earn is *peace*. They help us keep the things worth keeping.

Think it over. Are you buying as many Bonds as you *might*?

HOW YOU CAN REACH YOUR SAVINGS GOAL WITH U. S. SAVINGS BONDS (in just 8 years, 11 months)			
If you want about	\$2,500	\$5,000	\$10,000
each week, save	\$4.75	\$9.50	\$18.75
This shows only a few examples. You can save any sum, buying Bonds by Payroll Savings or where you bank. Start your program now!			



Photograph by Harold Halma

HELP STRENGTHEN AMERICA'S PEACE POWER BUY U. S. SAVINGS BONDS

The U.S. Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, The Advertising Council and this magazine.



THE POSITIVE LADDER SAFETY DEVICE



CLIMBING MADE SAFE!

If climber starts to fall, device locks in a notch automatically, instantly. Holds securely. Limits fall to 7 inches.

PREVENTS DEATH AND INJURIES —FROM FALLING

AUTOMATIC, POSITIVE. Will instantly catch and hold workman if he starts to fall, even if unconscious. Requires no attention from climber; he climbs in normal manner. Inexpensive. Easy to install; 3 men can clamp it to ordinary ladder in few hours. Clamps to any rung ladder, peg ladder, pole or framework. No welding or cutting. Notched rail hot-dipped galvanized. Entire equipment rust and corrosion proof. Can be kept free of ice by applying heat inside the carrier rail. In use approx. 10 years. Approved by Safety Engineers and Govt. Agencies throughout country. Patented. Manufactured only by

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**ATHLETE'S FOOT
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Outmodes poisonous
foot baths that
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**A MORALE
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BATHERS
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TRY IT—
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EASTERN SHIPPING DEPOT HUNTINGTON, IND

Circle Item No. 98—Reader Service Card

National Safety News, June, 1958

Depend on Metal Ladders

—From page 31

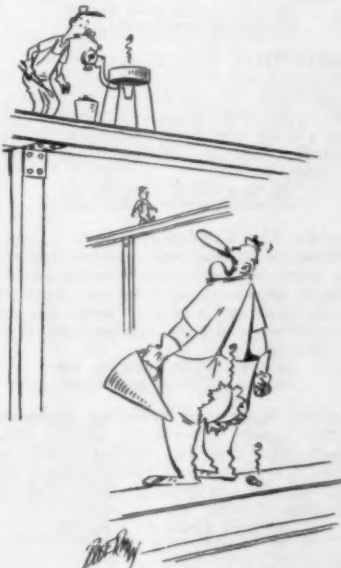
the vertical wall equal to about one-quarter the working length of the ladder.

Loading. Each portable ladder is designed as a one-man working ladder based on a 200-lb. working load. Of course, men weighing more than this do use ladders without cracking them, thanks to an ample factor of safety. But there is seldom any good reason for more than one man being on a ladder at a time, even though some catalog pictures show several men supported simultaneously in proof of the strength of the ladder.

Top support. The top of the ladder must be placed with the two rails supported, unless equipped with a single support attachment.

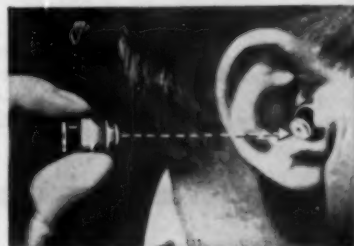
Climbing. When ascending or descending, the climber must face the ladder. He should also avoid climbing with his hands full. Tools which cannot be carried on a belt should be hoisted in a canvas bucket.

And the warning against using metal ladders around electrical equipment cannot be made too emphatic. Each ladder should carry a decal or painted sign warning against such use.



"Stop throwin' them rivets before I give you the signal!"

Lee Sonic EAR-VALVS Eliminate the HARMFUL Effects of NOISE to The EAR DRUMS...



A FREE 30 Second Demonstration will PROVE this BEYOND QUESTION We GUARANTEE THAT! Remember they are NOT EAR PLUGS!

They are scientifically developed sound controls that protect the ear drums without interfering with normal conversation or sound. We'll gladly send you a pair for actual demonstration. THEN you will find out why they are recommended and used wherever NOISE is a HAZARD and a deterrent to normal production. Send for your demonstration pair TODAY on company letterhead. No obligation to purchase.

SIGMA ENGINEERING COMPANY
1491 Vine St., Dept. F-3, Los Angeles 28, Calif.

You need all the hands you can get

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REDUCE ABSENTEEISM**

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antiseptic borated
hand-cleaning powder

**Removes shop grime gently
yet thoroughly —**

Reduces resident bacterial population on skin as much as 95%; contains hexachlorophene.

Prolax fights dermatitis Its heavy-duty cleaning action and sanitary feature mean added protection.

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Prolax is accepted enthusiastically by both men and women in shop and office. In bulk or 5 lb. boxes.

For free sanitary survey of your premises ask your Dolge service man

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TRADE PUBLICATIONS

These trade publications will keep you up-to-the-minute on new developments in safety equipment and health products. All catalogs are free, and will be sent without obligation. Just circle publication number on the Reader Service Postcard.



Wire Rope Slings

This 56-page booklet will help evaluate and select the proper slings for your plant. A glossary defines words and phrases commonly used in the wire rope field. Specification charts and review of underlying principles and performance included. Lowery Brothers, Inc., 9332 S. Anthony Ave., Chicago 17, Ill.

For more details circle No. 400 on enclosed return postal card.

Weed Killer

Those in the construction and utility industries will be particularly interested in this bulletin, which describes a weed killer for keeping your grounds free of weeds. Called "Ureabor," this chemical destroys vegetation, and prevents re-growth for a full season. United States Borax and Chemical Corp., 630 Shatto Place, Los Angeles 5, Calif.

For more details circle No. 401 on enclosed return postal card.

Working Safely

Safety is a subject we can never learn too much about. That's why you will be doing yourself and the employees in your plant a favor by providing them with copies of this new-pocket size guide to plant safety. "Working Safely" has been compiled by the Safety Engineers of Inland Steel Co., and includes the ten basic rules of the National Safety Council, as well as safety tips on many other subjects. Inland Steel Co., 30 W. Monroe St., Chicago 3, Ill.

For more details circle No. 402 on enclosed return postal card.

Plant Protection

For complete plant protection, your watchman must be rigidly supervised with a tape-recording watchclock. Literature describes how this tamper-proof "Guardman" keeps him alert, gives you a minute-by-minute record of his activities. Detex Watchclock Corp., 76 Varick St., New York 13, N. Y.

For more details circle No. 403 on enclosed return postal card.

Cleaning Tissue

With these tissues, you can wipe plastic lenses of safety goggles without scratching or marring the surface. Because these tissue fibres possess a high wet strength, lens may be cleaned when fogged or wet without causing the tissue to shred or tear. Literature gives full details. Lenclean, Inc., 135 W. 25th St., New York 1, N. Y.

For more details circle No. 404 on enclosed return postal card.

Ventilators and Fans

Ventilators, blowers, exhausters, of the axial flow and centrifugal types, and fans, are pictured and described in this catalog. Suggested applications given for each product and diagrams giving dimensions and specifications included. Coppus Engineering Corp., 125 Park Ave., Worcester 2, Mass.

For more details circle No. 405 on enclosed return postal card.

Oil and Gasoline Containers

This catalog, fully illustrated, offers the company's complete line of oilers and oil and gasoline containers. Many of the safety cans are UL and FM approved. The catalog is notable for the wide variety of cans and oilers shown. Eagle Mfg. Co., Wellsburg, W. Va.

For more details circle No. 406 on enclosed return postal card.

Plastic Eye Protectors

Better resistance of plastic eye-wear to impact, chemicals, and sparks plus finer optical qualities are featured in this catalog. Retractable temples, lens shapes, colors and ease of lens changing are also noted. Line of plastic lens, glasses, goggles and face shields illustrated. Watchmocket Optical Co., 232 W. Exchange St., Providence 3, R. I.

For more details circle No. 407 on enclosed return postal card.

Heavy Duty Skin Cleanser

Complete line of industrial skin cleansers listed. Stress laid on heavy duty cleanser, cost, approval of hygienic authorities, and test quality also receive attention. G. H. Packwood Mfg. Co., 1545 Tower Grove Ave., St. Louis 10, Mo.

For more details circle No. 408 on enclosed return postal card.

Guide Pin Covers

Brochure describes and gives specifications on covers for guide pins for die sets to protect operator and guide pin. Available in covers for gap only or for entire pin and gap. Wiesman Mfg. Co., 31 South St. Clair St., Dayton 2, Ohio.

For more details circle No. 409 on enclosed return postal card.

Safety Hats and Welding Helmets

This bulletin shows a line of fiber glass plastic hats, caps, and welding helmets to shield the wearer from falling objects, impact hazards and welding spatter. Jackson Products Division, Warren, Mich.

For more details circle No. 410 on enclosed return postal card.

Swivel-Mounted Lights

This fully illustrated bulletin shows a variety of incandescent and fluorescent

lights that are swivel-mounted for easy positioning as the work requires. Suitable models are included for benches, laboratories, machines, desks, etc. Swiveller Co., Inc., 30 Irving Place, New York, N. Y.

For more details circle No. 411 on enclosed return postal card.

Washroom Deodorizing

Descriptive folder shows how and where to use aromatic vaporizing cakes for control of odors in toilets, urinals, lockers, garbage, storage rooms, etc. C. B. Dolge Co., Westport, Conn.

For more details circle No. 412 on enclosed return postal card.

Industrial Safety Equipment

Protective gloves, aprons, sleeves and other industrial safety equipment are featured in this catalog, available from Charleston Rubber Co., 16 Stark Industrial Park, Charleston, S. C. Chemical reference charts for "Neo-Sol," "Hy-Sol" and natural rubber are included showing applications best suited for the particular type glove.

For more details circle No. 413 on enclosed return postal card.

Respirators

Respirators with 40 sq. in. double filters, which protect employees from pneumococcosis and silicosis producing dusts are described in literature featuring the "Dupor" 40, available from H. S. Cover, P. O. Box 2508, South Bend, Ind.

For more details circle No. 414 on enclosed return postal card.

Safety Mirrors

Safety mirrors which provide the answer to dangerous blind corner problems in your plant or warehouse are presented in a bulletin by Lester L. Brossard Co., 540 N. Michigan Ave., Chicago 11, Ill. Covering "Klear-Vu" safety mirrors, the bulletin lists the different sizes available in both convex and flat styles.

For more details circle No. 415 on enclosed return postal card.

Protective Apparel

Folder illustrates and describes protective apparel made of aluminized tropic asbestos. Shown are: Leggings, gloves, sleeves, helmets, aprons, coats and suits. Wheeler Protective Apparel, Inc., 226 W. Huron St., Chicago, Ill.

For more details circle No. 416 on enclosed return postal card.

Safety Signs

Signs and tags for accident prevention are presented in the full color catalog C-3 released by Standard Signs, Inc., 3190 E. 65th St., Cleveland, Ohio. The many types

of signs are printed in the different colors available and with the many messages which can be imprinted over or under the main eye-catching word.

For more details circle No. 417
on enclosed return postal card.

Safety Jackets

Excellent on-the-job protection is assured utility, construction, maintenance and road crews by Plastimay Safety Jackets. Fabricated from tough Bakelite "Krene," they generally offer 9,600-volt dielectric resistance, and as high as 16,000. Their Super-Weld seams, high degree of waterproofing, cold weather flexibility and yellow color guarantee all-around foul weather protection. Bulletin AC-Y gives full details. Plastimay Products Corp., Portland 14, Ore.

For more details circle No. 418
on enclosed return postal card.

Foot, Toe and Shin Guards

Illustrated folder gives data on a variety of aluminum, steel and fibre guards, designed to be worn over shoes or clothing for the protection of toes, feet, shins and knees. Units can be worn separately or in combination. Ellwood Safety Appliance Co., 225 6th St., Ellwood City, Pa.

For more details circle No. 419
on enclosed return postal card.

Seecloth

Fogging and misting on workers' eyewear and on transparent machine guards can be eliminated through application of "Seecloth" chemically treated fabric, which is described in literature published by Hygiene Research, Inc., 684 Broadway, New York 12, N. Y.

For more details circle No. 420
on enclosed return postal card.

Eye Protective Equipment

Eye protective equipment is presented in a 4-page bulletin, "This Is Protection—Plus Safety Eyewear," by Bausch and Lomb Optical Co., 635 St. Paul St., Rochester 2, N. Y. Many styles and types of safety eyewear equipment are displayed. Featured are Bal-Safe impact-resistant lenses.

For more details circle No. 421
on enclosed return postal card.

Lube System Additive-Solvent

Folder describes a flushing medium that is added to the lube or hydraulic system during machine operation to loosen gums and sludges and hold them in suspension until oil is changed routinely. Includes directions for use, shows safety features, and outlines case histories of typical applications. E. F. Houghton Co., 303 W. Lehigh Ave., Philadelphia 33, Pa.

For more details circle No. 422
on enclosed return postal card.

Stretcher-Type Carrier

Four-page brochure details a Stretcher-Type Carrier for injured personnel, which does not require lifting and placing the victim upon the carrier. Rather, the parts of the carrier are flipped under the victim and fastened together. The brochure points out that any movement to a victim with a broken back or neck can result in greater damage, even death. Sarole, Inc., 228 N. Wood Ave., Linden, N. J.

For more details circle No. 423
on enclosed return postal card.

Combustible Gas Indicator

Illustrated bulletin gives details on a portable unit for detecting and measuring natural gas in two ranges: Lower explosive limit and the actual gas concentration. Diagrams show principle of operation. Johnson-Williams, Inc., Box 307, Station "A", Palo Alto, Calif.

For more details circle No. 424
on enclosed return postal card.

Neo-Nylon Protective Clothing

Illustrated bulletin shows variety of welding safety clothing, welding curtains, etc., made from tear-resistant neo-nylon fabric. Garments can also be used for protection in breweries, lumber yards and foundries, come in many sizes and are light in weight. Robin W. Adair Co., Inc., P. O. Box 248, Avoca, N. Y.

For more details circle No. 425
on enclosed return postal card.

Floor Absorbents

A floor absorbent for oils, greases, fats, acids and soluble oils is explained in this bulletin. The fire-safe, non-combustible product is non-abrasive, but provides non-slip underfooting to reduce the danger of slipping accidents. Oil-Dri Corp. of America, 520 N. Michigan Ave., Chicago 11, Ill.

For more details circle No. 426
on enclosed return postal card.

Fire Extinguishers

Outlined in this illustrated folder is a brand of small-sized dry chemical extinguishers bearing the approval of UL. Construction details, applications, and size information are given for the extinguishers intended for use against Class B and C fires. Leeder Mfg. Co., 133 Woodside Ave., Briarcliff, N. Y.

For more details circle No. 427
on enclosed return postal card.

Industrial Work Gloves

Variety of neoprene and plastic coated gloves for men and women are pictured in this pocket-size folder. Gloves are in many weights and cuff lengths. Also includes comprehensive performance chart comparing wearing and chemical-resistant properties of different types. Hood Rubber Co., Watertown 72, Mass.

For more details circle No. 428
on enclosed return postal card.

Floor Treatments

Fall issue of floor treatments booklet. Well illustrated 16-pages of articles on training maintenance staff, floor cleaning methods. Details on equipment and where and how it can best be used. Hillyard Chemical Co., 402 N. 3rd St., St. Joseph 1, Mo.

For more details circle No. 429
on enclosed return postal card.

Changeable Letter Signs

Illustrated bulletin explains changeable letters that are attached to a single or double rail. The letters can be mounted flush or projected from the background, and are available in a choice of type styles, sizes and color. Wagner Sign Service, Inc., 216-226 S. Hoyne Ave., Chicago 12, Ill.

For more details circle No. 430
on enclosed return postal card.

Noise Reduction Panels

Panels to isolate or enclose noise are featured in this illustrated bulletin. They can be installed as ceiling-high or free-standing partitions, rolling panels, etc., and require no special tools to install. Elof Hansson, Inc., 711 3rd Ave., New York 17, N. Y.

For more details circle No. 431
on enclosed return postal card.

Ear Plugs

Illustrated folder describes a line of ear plugs designed to cut down all frequencies over the entire sound range. The plugs are flexible and mold themselves around high points and depressions of the ear canal for greater sound stoppage. Surgical Mechanical Research, Inc., 1905 Beverly Blvd., Los Angeles, Calif.

For more details circle No. 432
on enclosed return postal card.

Non-Skid Floor Treads

Illustrated brochure explains a line of abrasive-surfaced floor treads, which combines the advantage of open flooring with non-skid safety. Detailed information includes specifications, recommendations, and a safe load table for ordering the metal treads. Reliance Steel Products Co., McKeesport, Pa.

For more details circle No. 433
on enclosed return postal card.

Bridge Scaffold

An aluminum bridge scaffold is shown in a number of applications in this 4-page, illustrated brochure. Information includes specifications and construction details for the scaffold, which is mobile and adjustable for various working conditions and heights. R. D. Werner Co., Inc., 289 Fifth Ave., New York 16, N. Y.

For more details circle No. 434
on enclosed return postal card.

Explosion-Proof Lantern

Featured in this illustrated bulletin is an explosion-proof hand lantern for use in hazardous locations. The 1500-foot beam lantern is UL listed for Class 1, Group D hazards, as found in dry cleaning plants, paint spraying departments, chemical plants, etc. U-C-Lite Mfg. Co., 1050 W. Hubbard St., Chicago, Ill.

For more details circle No. 435
on enclosed return postal card.

Steel Doors

Hand operated, mechanically operated, and power-operated Underwriters' labeled and non-labeled rolling steel doors, grilles, and shutters to meet every door requirement, are described and illustrated in 16-page catalog G-57. Complete specifications are given for each type, along with drawings and dimensions. R. C. Mahon Co., 6565 E. Eight Mile Road, Detroit 34, Mich.

For more details circle No. 436
on enclosed return postal card.

Steel Floor Plate

The hundreds of safety applications for A. W. Algrim Abrasive Rolled Steel Floor Plate in various types of buildings are outlined in Booklet AL-E-27. An allowable uniform load table and a table of maximum sizes for plate from $\frac{3}{8}$ " to $\frac{1}{2}$ " in thickness are given to assist in selection of the proper plate. Alan Wood Steel Co., Conshohocken, Pa.

For more details circle No. 437
on enclosed return postal card.

Silencers

Series ADS Acoustic Discharge Silencers, designed to eliminate both high and low frequency noises caused by high velocity steam and air discharged to the atmosphere, are described in four-page bulletin 265. Specifications are given for optimum silencing, standard silencing, and for heavy industrial areas. Burgess-Manning Co., Libertyville, Ill.

For more details circle No. 438
on enclosed return postal card.

Interlocked-Armor Cables

A complete line of Anaconda Duralox Interlocked-Armor Cables is described and illustrated in 16-page brochure DM-5605. Included is information relating to applications, advantages, and construction features; installation, terminating, and jointing methods. Anaconda Wire and Cable Co., 25 Broadway, New York 4, N. Y.

For more details circle No. 439
on enclosed return postal card.

Welded Grating

This 8-page bulletin shows details of new lightweight, extra strong gold nugget welded grating suitable for power houses, loading docks, oil refineries, fire escapes, drain

grates, and all types of heavy duty platforms. General Engineering data, safe loading tables, and directions for specifying welded grating are given. The Globe Co., Grip-Strut Div., 4000 S. Princeton Ave., Chicago 9, Ill.

For more details circle No. 440
on enclosed return postal card.

The NMC Fallout

Three of the newest radiation detection instruments built by Nuclear Measurements Corp., are featured in the latest issue of "THE NMC FALLOUT," the firm's house organ. The main article is devoted to the AM-33, the only air monitor that measures and records directly and separately the alpha activity and beta-gamma activity of airborne particulates as they are collected. Also featured is the PCS-1 paper chromatograph scanner, used by biochemists and drug chemists to detect small amounts of labeled materials. The third instrument is the PC-3A proportional counting system for precision detection and measurement of alpha and beta-gamma activity. Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 18, Ind.

For more details circle No. 441
on enclosed return postal card.

This Is Du Pont

More than any organization in history, the large industrial corporation has demonstrated the "ability to bring people everywhere the technology and the gains of modern life," according to "THIS IS DU PONT," a booklet published today by the Du Pont Company. This 52-page booklet tells the story of industry's role in the modern American society, of which it is an inseparable element, and relates the development of industry with the growth of the nation—using the 156-year-old Du Pont Company for illustration. E. I. du Pont de Nemours and Co., Inc., Public Relations Dept., Wilmington 98, Del.

For more details circle No. 442
on enclosed return postal card.

Silent Chain Drives

(Book 2425), available from Link-Belt Co., Dept. P. R. Prudential Plaza, Chicago 1, Ill., contains 88 pages of detailed engineering data and illustrations of the versatility of silent chains in a wide range of applications. The book also contains tables of service factors, ratings, chain lengths and center distance computations. Pre-engineered stock drives are listed and a 22-page section outlines procedures for selections of engineered drives.

For more details circle No. 443
on enclosed return postal card.

Floor-Maintenance Equipment And Supplies

Illustrated 4-page folder describes "Everything For Floor Care"—Scrubbing, Waxing, Polishing, and Mopping Equipment; also Waxes, Sealers and Cleansers, with recommendations for use and packaging information. New or improved products include a low-built Motor-Weighted Floor-Maintenance Machine (800 Series) in several sizes. Finnell System, Inc., 2200 East St., Elkhart, Ind.

For more details circle No. 444
on enclosed return postal card.

Dual Manifold Filtration

A new 4-page bulletin describes the operating principles, filtering efficiency and applications of the Delpark Dual Manifold Filter-Matic Filter. Three types of Dual Manifold Filter-Matics are illustrated and described. The tubular screen filter, the leaf type filter and a unit designed for the removal of foam borne solids. Basic applications are in the filtration of coolants and cutting oils, honing oils and the filtra-

tions of water from wet type dust collectors. Industrial Filtration Co., Dept. DMB-331, Lebanon, Ind.

For more details circle No. 445
on enclosed return postal card.

Staplex Air Sampler

New uses are being discovered continually for a high volume air sampler marketed by the Staplex Company of Brooklyn, New York, described in a new brochure just released by that company. The latest applications of this research instrument have been in the nuclear field and in missile and rocket development programs. The unit is designed for accurately sampling large volumes of air for particulate matter. The Air Sampler, originally developed in the New York office of the United States Atomic Energy Commission for the purpose of detecting radioactive particles, has been widely used in government atomic energy testing and by private industry developing and manufacturing nuclear equipment. The Air Sampler has also been adopted as a basic instrument of research in such diverse fields as: municipal air pollution control departments, to measure particulate matter in smoke and smog; by weather services; by armed forces research units, to check atmospheric conditions; by mines and factories, to identify and measure air health hazards, etc. The new brochure, 1-H 4, describes the company's complete line of air samplers, filters and filter adapters. The Staplex Company Air Sampler Div., 777-5th Ave., Brooklyn 32, N. Y.

For more details circle No. 446
on enclosed return postal card.

Die Handling Study

Die handling, a difficult, hazardous and time consuming job, can be greatly simplified by the use of a narrow aisle electric industrial truck equipped with special attachments. An on-the-job study of die handling has been made and is now being offered by The Raymond Corporation. The report describes a common problem and tells how it was solved. Benefits enjoyed by the new method are listed. An illustration shows how the operation works. The Raymond Corporation, 34-63 Foundry St., Greene, N. Y.

For more details circle No. 447
on enclosed return postal card.

Aluminized Asbestos Suits

Described in an illustrated bulletin are the new M-S-A Air-Fed Oven Suits of aluminized asbestos fabric which offer "unmatched protection against radiant heat." Designed for workers engaged in the emergency repair of furnaces, bake ovens and similar installations requiring work under intense heat, the new aluminized asbestos suits reflect more than 90 per cent of all radiant energy. Contained in the bulletin are listings of various features with appropriate descriptions including: lightweight properties, one piece constructions, wide angle vision, dual air-feed and safety harness. Bulletin #1301-1. Mine Safety Appliances Co., 201 N. Braddock Ave., Pittsburgh 8, Pa.

For more details circle No. 448
on enclosed return postal card.

Model "B" Coupling

The Metal Productions Division of Koppers Co., Inc., has announced the publication of a new brochure on the use of Fast's Model "B" couplings. According to the company, this is the first low-priced, all-steel, gear-type, self-aligning coupling ever produced for shaft sizes up to 3-1/4 inches. The brochure outlines the principal features of the line of couplings and points out that the double engagement design compensates for any type of misalignment of the shafts. Ratings and dimensions of the couplings are also included. Koppers Co., Inc., Metal

Products Division, Publications Section, Baltimore 3, Md.

For more details circle No. 449
on enclosed return postal card.

Safety Code for Inspection, Maintenance and Protection of Fixed Foam Systems

A new "Safety Code for Inspection, Maintenance, and Protection of Fixed Foam Systems" is now available from the Fire Equipment Manufacturers' Association, Inc., Suite 759, One Gateway Center, Pittsburgh 22, Pa. This brochure outlines the three most popular types of foam systems now in use—chemical foam, indoor foam, and outdoor foam. These three systems provide fire protection for flammable liquids in quantities from a few gallons to millions of barrels. This Safety Code covers such procedures as recharging; pipe drainage; checking air aspirating devices; hydrostatic testing; inspection of operating mechanisms; calibrating pressure gauges, etc. When properly employed, these procedures and the others covered in the Safety Code, will insure effective use and long life for each of the three systems.

For more details circle No. 450
on enclosed return postal card.

Gloves and Finger Cots

A complete line of finger cots and curved-finger rubber, latex, neoprene and plastic gloves are fully described and illustrated in this 16-page catalog. Also provided is a two-page recommended-use table showing the resistance ratings of the glove materials to chemicals and solvents commonly used in industry. Industrial Div., Wilson Rubber Co., 1200 Garfield Ave., S. W., Canton 6, Ohio.

For more details circle No. 452
on enclosed return postal card.

Stair Treads

A line of "safety designed," molded rubber stair treads are described in a bulletin available from the R. C. Musson Rubber Co., 10 South College St., Akron, Ohio. They are heavy duty treads, said to improve the safety, cleanliness and service for stairs of factories, office buildings, hotels, hospitals, stores, churches and other mass traveled stairs. Identified as Model No. 1000, Perfect-Fit Stair Treads, they were offered in only two sizes, some months ago. This provided extensive, rigorous field testing which proved the new horizontal-bar "safety" pattern and other features are highly efficient. Accordingly, they are being presented now in a full range of standard 24", 30", 36", 48", 60" and 72" lengths. All are 12-inches deep. They can be trimmed to exact step size and easily applied on wood, metal, marble or terrazzo.

For more details circle No. 453
on enclosed return postal card.

Emergency Apparatus

Catalog #10 illustrates and describes company's complete line of ambulance cots, emergency stretchers, mortuary tables, stair chairs, church trucks and miscellaneous equipment. Complete specifications and prices included. Washington Products Co., 240 S. Fayette St., Washington C. H., Ohio.

For more details circle No. 454
on enclosed return postal card.

Oxygen Analyzer

A bulletin 0-4200 describes the use of a Beckman Model F3 Oxygen Analyzer on a catalytic cracker of a major oil refinery. A description of the installation, together with illustrations and a flow diagram, presents details on the analyzer, which has been in continuous operation since October, 1954. Analyzing for oxygen content of 2 to 3

per cent in flue gas with a daily feed worth over \$100,000 (\$4,000 per hour), the analyzer has paid for itself many times over. Beckman Process Instruments Division, 2500 Fullerton Road, Fullerton, Calif.

For more details circle No. 455
on enclosed return postal card.

Self-Sealing Fasteners

A new 4-page, 2-color folder available from Automatic and Precision Mfg. Co., 252 Hawthorne Ave., Yonkers, N. Y., describes and illustrates a line of high-pressure self-sealing Seelskrews, Seelbolts, and Seelrivets for industrial and military use. The fasteners seal out dust fumes and moisture, and were designed for vibration resistance in critical sealing applications. Each of the three different types is presented by means of line drawings, descriptive text, and a table of dimensions and thread sizes. Data is grouped conveniently on the two inside pages so that frequent users of this kind of fastener may use the folder as a wall chart. General features of all APM self-sealing fasteners are listed on the front cover, and instructions for ordering and use are given on the back cover.

For more details circle No. 454
on enclosed return postal card.

Mercury Switch

Data Sheet 144 describes a new nylon-enclosed mercury switch, fabricated of materials which are highly resistant to the effects of water, oil, alkalis and acids. A synthetic rubber embedment material protects the precision switching unit from shock and seals the lead entrance. Photographs, including a cutaway view, price information, mounting clip data, drawings and electrical rating are included. Micro Switch, Freeport, Ill.

For more details circle No. 457
on enclosed return postal card.

Three New Lighting Booklets

Three new booklets describing various aspects of commercial, industrial, and residential lighting have been released by Sylvania Lighting Products, a Division of Sylvania Electric Products, Inc., 60 Boston St., Salem, Mass. The publications are entitled: "More Light Where You Need It With Reflector Lamps," "Incandescent Lighting Guide Book," and "The Story of Infrared Lamps."

For more details circle No. 458
on enclosed return postal card.

Prevention of Poison Ivy Dermatitis

A 7-page booklet is designed for use in training of supervisors and workers in poison ivy and poison oak dermatitis prevention. It outlines a three-point program, stressing (1) education, (2) personal housekeeping and (3) avoidance of skin contact with poison ivy oils. It explains the cause of poison ivy dermatitis, the manner in which the poison is spread and the course of the symptoms. It gives rules for avoiding contamination from clothing, tools, burning plants, etc. Procedures for skin protection through personal cleanliness and proper use of barrier creams are outlined. Illustrations show characteristic leaves and fruits of the poison plants. Milburn Co., 3246 E. Woodbridge, Detroit 7, Mich.

For more details circle No. 459
on enclosed return postal card.

Safeway Hand Hoists

Available in 17 different lifting capacities from 1/2 to 50 tons, the complete line of Wright Safeway Hand Hoists is described in a fact-filled 8-page bulletin prepared by the Wright Hoist Division, American Chain and Cable Co., Inc., York, Pa. Bulletin DH-164-C gives data on features such as the unit's compact, fully enclosed and rugged

design, specifications, clearances, and dimensions, all of interest to plant personnel with materials handling problems.

For more details circle No. 460
on enclosed return postal card.

A Glove for Every Job

Two new items have just been introduced by the Pioneer Rubber Co., of Willard, Ohio, as part of their continuing program of providing hand protection services to industrial glove users. An attractively illustrated, 17" x 22" two-color wall chart with an easy-to-read index, displays the full line of Pioneer Industrial Gloves giving all necessary specifications of each model as to material, weight, size, etc. The second item, a handy pocket folder, offers a comprehensive guide with instructions for selecting the correct glove for a particular industrial application. Included in the folder is a glove selector check list; detailed chemical performance ratings, outlining the results of tests made with Pioneer Gloves using various chemicals, acids, greases, oils, etc.; as well as a reprint of the industrial glove wall chart described before.

For more details circle No. 461
on enclosed return postal card.

Flammable Liquids

This 4-page illustrated bulletin gives valuable background information and practical methods for the safe handling of flammable liquids in maintenance departments. The bulletin is Part 8 of a series on safety practices for flammable liquids. Protectoseal Co., 1920 S. Western Ave., Chicago 8, Ill.

For more details circle No. 462
on enclosed return postal card.

Press Guards

A pull-back type of guard that pulls the punch press operator's hands out of the danger zone and offers protection if the press repeats is described in a 4-page bulletin. Well illustrated, the brochure shows how the device's compact design requires no column in the aisle and how excessive pull-back of the hand is avoided. Safeguard Mfg. Co., Transylvania Road, Woodbury, Conn.

For more details circle No. 463
on enclosed return postal card.

Floor Tile

Three kinds of floor tiles are covered in a 4-page bulletin (AIA-23-G): Heavy-Duty Flooring that withstands oils, greases, plant traffic, plastic-asbestos tile with light reflectivity, vinyl-asbestos tile with dense surface that dirt does not penetrate. Color charts included. The Flintkote Co., 10 E. 49th St., New York, N. Y.

For more details circle No. 464
on enclosed return postal card.

Noise Control Products

This 32-page catalog No. 1-AC-43 illustrates and describes line of Fiberglas Noise-Control materials that include a product for "every sound control need." Has handy selection guide, helpful tables, photos. Owens-Corning Fiberglas Corp., National Bank Bldg., Toledo 1, Ohio.

For more details circle No. 465
on enclosed return postal card.

Fireproofing Tape

A specially designed industrial tape to protect cables in circuits with fast-acting breakers is discussed in 4-page brochure TX-6-A. Product has many fireproofing uses. Has photos, table of sizes, water absorption. Johns-Manville Corp., 22 East 40th St., New York, N. Y.

For more details circle No. 466
on enclosed return postal card.

Color Dynamics

Fully-illustrated book which explains the principles of Color Dynamics and how to use them in industry. It contains numerous practical suggestions. Pittsburgh Plate Glass Co., Paint Division, Pittsburgh 22, Pa.

For more details circle No. 467
on enclosed return postal card.

Portable Sound Control Units

A new, two-color, 4-page brochure describing Acoustosorber—lightweight, portable sound absorbing units for general building and industrial plant applications. The USG Acoustosorber is a hollow pyramid of tough vinyl plastic backed with a mineral fiber blanket. Lightweight and portable, the units may be installed quickly and economically to make an acoustical system which can be moved from one location to another. The brochure is illustrated with installation photos and a sound reduction rating chart for Acoustosorber sound control units. U. S. Gypsum Co., Dept. 136, 300 W. Adams St., Chicago 6, Ill.

For more details circle No. 468
on enclosed return postal card.

Skin Cleansers

Illustrated bulletin describes eight types of powdered soaps with suitable areas of application, and also gives data on bar and liquid soaps and on a new soap dispenser. Lightfoot Co., Inc., 380 Madison Ave., New York, N. Y.

For more details circle No. 469
on enclosed return postal card.

For Industrial Safety:

Willson Products Division of the Ray-O-Vac Company has issued a new descriptive catalog showing the firm's full line of personnel safety equipment. Lens properties and materials and frame construction and sizing and fitting in addition to product descriptions showing individual components and parts are explained. Particular attention is called to these new Willson safety equipment items added during the past year: No. 100 series Monogoggle, No. 600A MonoMask Respirator; AF & AFS Metal Frame Spectacles; Improved Phenolic Super-Tough Hats and Caps; Quilted Winter Liners WL5 and WL6; Goggles with attachments for Hard Caps; and F7 Shape Lens Contour-Specs. Willson Products Division, Ray-O-Vac Co., 212 E. Washington Ave., Madison, Wis.

For more details circle No. 470
on enclosed return postal card.

Eliminate Floor Hazards:

Flocco and its role in elimination of floor hazards are covered in literature and samples available from the Floridin Co., Dept. T., P. O. Box 989, Tallahassee, Fla. The product can be applied to any type floor and will absorb liquids of all kinds. Flocco combines high absorption capacity with physical strength; it is one of the few materials of its type to meet Armed Forces specifications and be approved by the Underwriter's Laboratories.

For more details circle No. 471
on enclosed return postal card.

Explosion-Proof Floor Machine:

Bulletin introduces the Hild Model CX, first and only explosion-proof floor machine UL listed for Class 1, Group D, and Class 2, Group G. Plants, refineries and mills with explosive atmospheres will be especially interested. The manufacturer has a selection of static conductive brushes for scrubbing, polishing and dry scraping. A three-gallon tank on the handle converts the unit for fast floor-scrubbing. Hild Floor Machine Co., 1217 W. Washington St., Chicago 6, Ill.

For more details circle No. 472
on enclosed return postal card.

MARKS OF QUALITY in SAFETY EQUIPMENT



AIRCO • OHIO • JACKSON

Safety goggles, spectacles and lenses. Helmets and face shields. Protective clothing. Safety (hard) hats. Portable oxygen resuscitator units. Bellows (air) portable resuscitators.

Write for full-color brochure.

AIR REDUCTION SALES COMPANY

A division of Air Reduction Company, Incorporated
150 E. 42nd St., New York 17, N. Y.
OFFICES IN MOST PRINCIPAL CITIES



Big Beam AUTOMATIC EMERGENCY LIGHTS

Storage Battery Always Fully Charged—Built-in Charger. Just plug in a BIG BEAM Emergency Light and rest assured that when regular lights fail, your plant or building will be protected automatically with hours of bright, SAFE illumination. Variety of models available.



HAND LAMPS • FLARES

Wide range of hand lamps and flares also available, including Explosion-Proof Hand Lantern, Model 287EX for use in Hazardous Locations, Class I, Group D, Approved by Underwriters' Laboratories.

Write for Bulletin
on Complete Big Beam Line 7025

U-C-LITE MFG. CO. 1027 W. Hubbard St.
Chicago 22, Ill.

Canada: Bernard Marks & Co., Ltd., 70 Claremont St., Toronto 3, Ont.
Circle Item No. 102—Reader Service Card

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FIRE CHIEF INDUSTRIAL

Callery Chemical Company has immediate opening, in Muskogee Oklahoma Plant for Fire Chief.

QUALIFICATIONS

1. High School Graduate.
2. Minimum three years' experience in flammable liquids, fire prevention and extinguishment.
3. Working knowledge of sprinkler and spray systems.
4. Must be capable of organizing and training Industrial Fire brigade.
5. Must be capable of vigorous physical action.

If interested, please send resume to Personnel Department, Callery Chemical Company, P.O. Box 1452, Muskogee, Oklahoma.

Use the **READER SERVICE POSTCARD**

to obtain more information on . . .

• **Advertised Products**

• **New Safety Equipment**

• **Trade Literature**

Here's how it works—

Printed below are two identical Reader Service postcards—the bottom one for your use; the top one for later readers of the issue. All advertisements, New Safety Equipment announcements and Trade Publica-

tion listings carry item numbers corresponding to the numbers printed on the cards. Just circle the numbers of the items you want to know more about, and send us the postage-free card. We'll ask the manufacturer to send you full information—without obligation.

Advertised Products

—feature equipment and services that will help you solve accident problems in your plant. Instead of making a "mental note," make sure you get full information by sending in the card. If no item number appears with an ad, it will be found on the opposite page, next to the arrow. Cover position ads are shown on the cards as: IFC—inside front cover; IBC—inside back cover; BC—back cover.

New Safety Equipment

—shown in the special section has been carefully reviewed. Only new products or new-worthy improvements in existing equipment are considered eligible for this section.

Trade Publications

—are catalogs, brochures, spec sheets and booklets—a wealth of helpful literature—describing equipment and services that will assist you in comparing before you buy. You can build a valuable safety equipment reference file with these free publications.

IMPORTANT—Be sure to fill in your name, organization and address in the space provided on this side of the postcard.

Please send me more information on the items circled below:

PRODUCTS ADVERTISED:

IFC	IBC	BC	1	2	3	4	5	6	7	8	9	10	11	12	13	14
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COMPANY

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JUNE, 1958

(Good until August 31, 1958)

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The advertising pages of the News

... your guide to products of importance and help to your plant safety program

Keep up-to-the-minute on all the latest advances in industrial safety products and services through the advertising pages and new safety equipment features in the NATIONAL SAFETY NEWS.

Should you want additional information or special consultation on your specific problems, don't hesitate to write to the manufacturers. They welcome your inquiries and will answer your questions without obligation.

Although the Council does not test or examine the products advertised or mentioned in the editorial features, staff engineers and technicians review all product information in an effort to determine that descriptions and performance claims are accurate. It should not be construed, however, that commercial products are approved or endorsed by the National Safety Council.

Before you mail your
Reader Service
postcard . . .

**TAKE
ANOTHER
LOOK
AT**

- the ADVERTISING pages
- the NEW SAFETY EQUIPMENT section
- the TRADE PUBLICATION section

Make sure all the items you want to know more about are circled . . . check to make sure your name, organization, and address are printed on the reverse side of the postcard . . . THEN mail it today.

National Safety News, June, 1958

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CESCO

answers still another of your
Safety Equipment needs!

Introducing

NEW CESCO
All-Plastic
Safety Glasses
with Side Shields



You asked for them! Now here they are!...

New All-Plastic Safety Glasses with Side Shields. Designed and engineered to utilize the most modern materials available, frames and side shields of these new CESCO safety glasses are made of rugged translucent plastic. Lightweight and comfortable to wear, they are ideally suited to meet a wide range of uses where total-enclo-

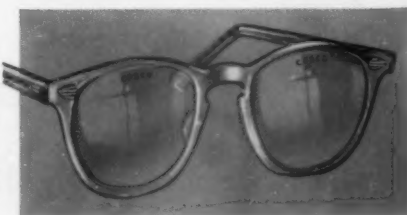
sure protection is a "must." Plastic side shields are securely fastened to frames. Perforations in shields give proper eye ventilation, and at the same time, eliminate bothersome lens "clouding." Available in flesh tone plastic to win wide worker acceptance.

Here are other features of these outstanding new CESCO Safety Glasses:

- Your choice of two sizes: No. 386 (46 x 39mm), No. 387 (48 x 41mm)
- Popular F7 shape Lens is removable for easy "on-the-spot" repair
- Broad-bearing Nosepads give comfortable distribution of glass weight

ORDER BOTH WAYS...

• If you desire, these new CESCO All-Plastic Safety Glasses can be ordered without side shields. They offer the same outstanding features as the glasses described above. Three sizes: No. 375F (44 x 37mm), No. 376F (46 x 39mm), No. 377F (48 x 41mm)



ASK your distributor to show you his complete line of CESCO head and eye protective equipment. There's a CESCO distributor located in most major cities coast-to-coast.

CESCO





†Registered by Raybestos-Manhattan, Inc.

For Light Weight, Long Wear Protection . . .

AO SILVABESTOS CLOTHING

Here's American Optical's new line of improved coated asbestos clothing which offers unusual abrasion resistance, lightweight, flexibility and comfort, and a heat reflection of about 40%. It is designed for operations where the high radiant heat reflectivity of our aluminized line is not required.

Abrasion tests of AO Silvestos show increased wear resistance up to 168 per cent over conventional asbestos of heavier weight — an advantage of particular im-

portance in gloves. What's more, Silvestos clothing has superior tensile strength and stronger seams and does not readily absorb oil and grease.

Workers will appreciate the lighter weight of this clothing which minimizes fatigue and makes for greater efficiency on the job.

Recommended uses: Open hearth operations, heat treating, exposure to molten metal and similar exposures. (Should not be used in contact with open flame.)

*Always insist on
AO Trademarked
Safety Products*



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